PHILTRE

Reference Manual

ALESIS

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Table of Contents

Introduction

Welcome!

Thank you for making the Alesis Philtre a part of your studio. Since 1984, we've been designing and building creative tools for the audio community. We believe in our products, because we've heard the results that creative people like you have achieved with them. One of Alesis' goals is to make high-quality studio equipment available to everyone, and this Reference Manual is an important part of that. After all, there's no point in making equipment with all kinds of capabilities if no one explains how to use them. So, we try to write our manuals as carefully as we build our products.

The goal of this manual is to get you the information you need as quickly as possible, with a minimum of hassle. We hope we've achieved that. If not, please drop us an email and give us your suggestions on how we could improve future editions of this manual.

We hope your investment will bring you many years of creative enjoyment and help you achieve your goals.

Sincerely,
The people of Alesis

For more effective service and product update notices, please register your Philtre online at:

www.alesis.com/ support/ warranty.htm

About the Philtre

Your new Philtre is a member of the Alesis ModFX family of performance effects boxes. This particular ModFX unit is a filter effect with modulation.

Each ModFX unit provides a different set of sound effects and signal processing, and they are easy to arrange and connect to each other. With a uniform, friendly, uncomplicated user interface and high-resolution digital processing, the ModFX product line is perfect for keyboardists, guitarists, and any other studio or live performance artists.

Important features of your Philtre

High Resolution Processing

The Philtre internally uses 28-bit stereo digital signal processing. The digital-to-analog and analog-to-digital conversion is sampled at 48kHz with 24 bits of resolution. That means you can get the effect you want, without adding unwanted noise and distortion.

ModLink

If you're using multiple ModFX boxes to make your own unique effects chain, ModLink makes it easy to hook up without needing patch cords between units in the chain. The nine-pin connectors built into each side of the case enable a ModFX box to transfer digital audio and word clock directly to another. Any number of units can be connected together.

Configurable Modulation

The Philtre features configurable modulation. The user can control the shape, rate, and depth of the modulation, and it can be triggered by the audio input itself. The rate of modulation can be synchronized to the tempo, both by tap tempo and by audio input.

Philtre Key Features

- Four different filter types, with steep slope switch and adjustable regeneration

- Five different modulation sources, including Trigger and Envelope for note-by-note filter sweeping

- Tempo synchronization keeps filter effect in time with the music

- Tap Tempo makes it easy to set the speed of modulation by tapping a beat on the top panel

- Uniform, friendly, uncomplicated user interface—no fiddling with complicated menus or "hidden" knobs

- Reset Mod lets you reset the phase of any modulation shape from its beginning

- Stereo processing via four 1/4" unbalanced connectors

- ModLink port, a cable-free connection that transfers digital audio and word clock to other boxes in the ModFX family

- Footswitch connection to control the bypass function

- Ability to mount 3 ModFX boxes in the optional ModFX rack adapter

- Input trim control to adjust input level

- Internal 28-bit digital processing

- 24-bit D/A and A/D conversion at 48kHz sampling rate for quiet, distortion-free effects

- External 9VAC power supply included

How to Use This Manual

A little technical knowledge will help you get the most out of your gear...it's really pretty simple. This manual is divided into the following sections describing the various functions and applications for the Philtre. While it's a good idea to read through the entire manual once carefully, those having general knowledge about effect devices should use the table of contents to look up specific functions.

Helpful tips and advice are highlighted in a shaded box like this

Chapter 1: Quick Start. If you're already experienced with effect boxes, this will get you started using the Philtre right away. It's a short guide to the essential elements of hooking it up and using it for the first time. A brief tour of the front and rear panels also directs you to the chapters focused on individual features.

Chapter 2: Connections gives detailed instructions for connecting the Philtre to a variety of typical audio systems. It also discusses the process of linking the Philtre with other ModFX devices.

Chapter 3: Using the Philtre explains the controls of the Philtre and their functions.

Chapter 4: Sample Settings provides a selection of sound charts created by the sound designers at Alesis for you to try.

Near the end of the manual are troubleshooting tips, specifications, and an index to help you find what you're looking for.

When something important appears in the manual, an exclamation mark (like the one shown at left) will appear with some explanatory text. This symbol indicates that this information is vital when operating the Philtre.

Safety Instructions/Notices

Important Safety Instructions (English)

Safety symbols used in this product

This symbol alerts the user that there are important operating and maintenance instructions in the literature accompanying this unit.

This symbol warns the user of uninsulated voltage within the unit that can cause dangerous electric shocks.

This symbol warns the user that output connectors contain voltages that can cause dangerous electrical shock.

Please follow these precautions when using this product:

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with a damp cloth. Do not spray any liquid cleaner onto the faceplate, as this may damage the front panel controls or cause a dangerous condition.

7. Install in accordance with the manufacturer's instructions.

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

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

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

11. Use only attachments or accessories specified by the manufacturer.

12. Use only with a cart, stand, bracket, or table designed for use with professional audio or music equipment. In any installation, make sure that injury or damage will not result from cables pulling on the apparatus and its mounting. If a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

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

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the 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.

15. This unit produces heat when operated normally. Operate in a well-ventilated area with at least six inches of clearance from peripheral equipment.

16. This product, in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

17. Do not expose the apparatus to dripping or splashing. Do not place objects filled with liquids (flower vases, soft drink cans, coffee cups) on the apparatus.

18. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

CE Declaration Of Conformity

See our website at:

http://www.alesis.com

FCC Compliance Statement

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Instructions de Sécurité Importantes (French)

Symboles utilisés dans ce produit

⚠ Ce symbole alèrte l'utilisateur qu'il existe des instructions de fonctionnement et de maintenance dans la documentation jointe avec ce produit.

⚠ Ce symbole avertit l'utilisateur de la présence d'une tension non isolée à l'intérieur de l'appareil pouvant engendrer des chocs électriques.

⚡ Ce symbole prévient l'utilisateur de la présence de tensions sur les raccordements de sorties, représentant un risque d'électrocution.

Veuillez suivre ces précautions lors de l'utilisation de l'appareil:

1. Lisez ces instructions.

2. Gardez ces instructions.

3. Tenez compte de tous les avertissements.

4. Suivez toutes les instructions.

5. N'utilisez pas cet allareil à proximité de l'eau.

6. Ne nettoyez qu'avec un chiffon humide. Il est potentiellement dangereux d'utiliser des pulvérisateurs ou nettoyants liquides sur cet appareil.

7. Installez selon les recommandations du constructeur.

8. Ne pas installer à proximilé de sources de chaleur comme radiateurs, cuisinière ou autre appareils (don't les amplificateurs) produisant de la chaleur.

9. Ne pas enlever la prise de terre du cordon secteur. Une prise murale avec terre deux broches et une troisièrme reliée à la terre. Cette dernière est présente pour votre sécurité. Si le cordon secteur ne rentre pas dans la prise de courant, demandez à un électricien qualifié de remplacer la prise.

10. Evitez de marcher sur le cordon secteur ou de le pincer, en particulier au niveau de la prise, et aux endroits où il sor de l'appareil.

11. N'utilisez que des accessoires spécifiés par le constructeur.

12. N'utilisez qu'avec un stand, ou table conçus pour l'utilisation d'audio professionnel ou instruments de musique. Dans toute installation, veillez de ne rien endommager à cause de câbles qui tirent sur des appareils et leur support.

13. Débranchez l'appareil lors d'un orage ou lorsqu'il n'est pas utilisé pendant longtemps.

14. Faites réparer par un personnel qualifié. Une réparation est nécessaire lorsque l'appareil a été endommagé de quelque sorte que ce soit, par exemple losrque le cordon secteur ou la prise sont endommagés, si du liquide a coulé ou des objets se sont introduits dans l'appareil, si celui-ci a été exposé à la pluie ou à l'humidité, ne fonctionne pas normalement ou est tombé.

15. Puisque son fonctionement normale génère de la chaleur, placez cet appareil au moins 15cm. des équipments péripheriques et assurez que l'emplacement permet la circulation de l'air.

16. Ce produit, utilisé avec un amplificateur et un casque ou des enceintes, est capable de produite des niveaux sonores pouvant engendrer une perte permanente de l'ouïe. Ne l'utilisez pas pendant longtemps à un niveau sonore élevé ou à un niveau non confortable. Si vous remarquez une perte de l'ouïe ou un bourdonnement dans les oreilles, consultez un spécialiste.

17. N'exposez pas l'appareil à l'égoutture ou à l'éclaboussement. Ne placez pas les objets remplis de liquides (vases à fleur, boîtes de boisson non alcoolique, tasses de café) sur l'appareil.

18. AVERTISSEMENT: Pour réduire le risque du feu ou de décharge électrique, n'exposez pas cet appareil à la pluie ou à l'humidité.

Lesen Sie bitte die folgende Sicherheitshinweise (German)

Sicherheit Symbole verwendet in diesem Produkt

⚠️ Dieses Symbol alarmiert den Benutzer, daß es wichtige Funktionieren und Wartung Anweisungen in der Literatur gibt, die diese Maßeinheit begleitet.

⚡ Dieses Symbol warnt den Benutzer der nicht isolierten Spannung innerhalb der Maßeinheit, die gefährliche elektrische Schläge verursachen kann.

⚡ Dieses Symbol warnt den Benutzer, dem Ausgabestecker Spannungen enthalten, die gefährlichen elektrischen Schlag verursachen können.

Folgen Sie bitte diesen Vorkehrungen, wenn dieses Produkt verwendet wird:

⚠️

1. Lesen Sie die Hinweise.

2. Halten Sie sich an die Anleitung.

3. Beachten Sie alle Warnungen.

4. Beachten Sie alle Hinweise.

5. Bringen Sie das Gerät nie mit Wasser in Berührung.

6. Verwenden Sie zur Reinigung nur ein weiches Tuch. Verwenden Sie keine flüssigen Reinigungsmittel. Dies kann gefährliche Folgen haben.

7. Halten Sie sich beim Aufbau des Gerätes an die Angaben des Herstellers.

8. Stellen Sie das Gerät nich in der Nähe von Heizkörpern, Heizungsklappen oder anderen Wärmequellen (einschließlich Verstärkern) auf.

9. Verfehlen Sie nicht den Zweck des grounging Terminals auf dem Netzstecker. Dieses Terminal wird für Ihre Sicherheit zur Verfügung gestellt.

10. Verlegen Sie das Netzkabel des Gerätes niemals so, daß man darüber stolpern kann oder daß es gequetscht wird.

11. Benutzen Sie nur das vom Hersteller empfohlene Zubehör.

12. Verwenden Sie ausschließlich Wagen, Ständer, oder Tische, die speziell für professionelle Audio- und Musikinstrumente geeignet sind. Achten Sie immer darauf, daß die jeweiligen Geräte sicher installiert sind, um Schäden und Verletzungen zu vermeiden. Wenn Sie einen Rollwagen benutzen, achten Sie darauf, das dieser nicht umkippt, um Verletzungen auszuschließen.

13. Ziehen Sie während eines Gewitters oder wenn Sie das Gerät über einen längeren Zeitraum nicht benutzen den Netzstecher aus der Steckdose.

14. Die Wartung sollte nur durch qualifiziertes Fachpersonal erfolgen. Die Wartung wird notwendig, wenn das Gerät beschädigt wurde oder aber das Stromkabel oder der Stecker, Gegenstände oder Flüssigkeit in das Gerät gelangt sind, das Gerät dem Regen oder Feuchtigkeit ausgesetzt war und deshalb nicht mehr normal arbeitet oder heruntergefallen ist.

15. Dieses Gerät produziert auch im normalen Betrieb Wärme. Achten Sie deshalb auf ausreichende Lüftung mit mindestens 15 cm Abstand von anderen Geräten.

16. Dieses Produkt kann in Verbindung mit einem Verstärker und Kopfhörern oder Lautsprechern Lautstärkepegel erzeugen, die anhaltende Gehörschäden verursachen. Betreiben Sie es nicht über längere Zeit mit hoher Lautstärke oder einem Pegel, der Ihnen unangenehm is. Wenn Sie ein Nachlassen des Gehörs oder ein Klingeln in den Ohren feststellen, sollten Sie einen Ohrenarzt aufsuchen.

17. Setzen Sie den Apparat nicht Bratenfett oder dem Spritzen aus. Plazieren Sie die Nachrichten, die mit Flüssigkeiten (gefüllt werden Blumevases, Getränkdosen, Kaffeetassen) nicht auf den Apparat.

18. WARNING: um die Gefahr des Feuers oder des elektrischen Schlages zu verringern, setzen Sie diesen Apparat nicht Regen oder Feuchtigkeit aus.

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Quick Start Guide

If you can't wait to get started

The Alesis Philtre is a unique product, but its basic hookup and operation is similar to other effects units in most respects. If you're experienced with signal processors, this chapter is a "shorthand" guide for those who want to start using the Philtre right away. If you have questions about any of the features, don't worry – later chapters will unveil the mysteries of the Philtre's special features.

If you're new to signal processing...
start with the more detailed instructions for hookup and operation starting in the next chapter.

Hook it up to a synthesizer

1. First, make sure the power is off to all the components you're connecting to: amp, mixer, and instruments.

2. Pull the Philtre and its power supply out of the package.

3. Using a pair of 1/4" instrument cables, plug the outputs of the synthesizer into the INPUTS on the back of the Philtre.

4. Connect the OUTPUTS of the Philtre to the inputs of a mixer, powered speakers, or instrument amplifier.

5. Insert the power jack of the Philtre's power adapter into the POWER 9VAC input on the rear panel of the Philtre and plug the power adapter into an AC outlet (preferably on a power strip with its switch off).

    The Philtre doesn't have a POWER switch of its own. The moment you plug in the power, its top panel LEDs will come on.

6. Turn the power on to the system: the keyboard, then the Philtre's power strip (if it's not already on), then the mixer, then the amp.

7. Turn the INPUT TRIM knob on the back of the Philtre while playing the keyboard to adjust the input level. The SIGNAL LED on the top panel will light green, not red, when the level is correct.

8. Experiment with the knob and button settings on the Philtre to create different sounds.

For more detailed information on connecting the Philtre, see chapter 2: Connections.

A quick overview of the controls

TYPE
The TYPE switch selects the kind of filter as shown by the LEDs next to the switch. See page 36.

STEEP
This increases the slope of the chosen filter curves.

Reset Mod
Retarts the modulation from the beginning of its cycle. Generates a trigger in TRIGGERED mode, or changes the pattern in PATTERN mode.

TAP TEMPO
Active in TEMPO SYNC mode only. Tap a regular beat on this button, and the mod speed of the Philtre will be set at some multiple of that beat, as set by the RATE knobs.

MODULATION SELECT switch selects the type of wave used to modulate the filter frequency.
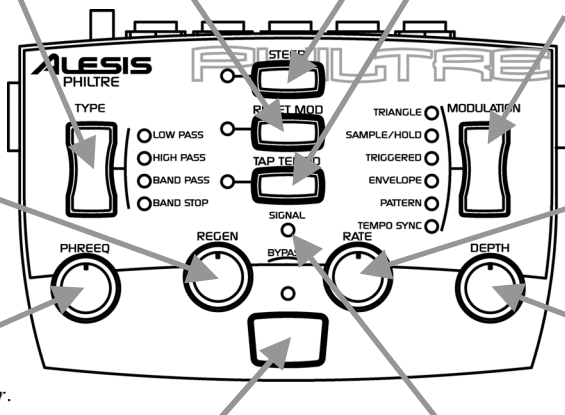
REGEN (*regeneration*)
This increases gain at the filter corner for a sharper filter peak. In Band modes it also sets the width of the band.

The **RATE** knob affects the modulation speed, in cooperation with the TEMPO SYNC and TAP TEMPO buttons. See page 39.

PHREEQ
Determines the frequency center or corner of the filter.

DEPTH controls the depth of the modulation.

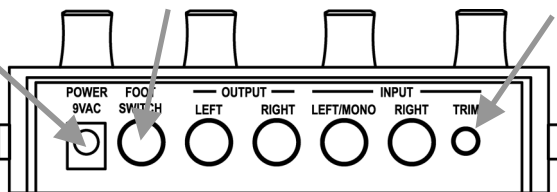**BYPASS** lets signal pass through without any filtering.

SIGNAL LED
When this lights green, the Philtre is getting an input signal. When it's red, it's seeing too much level, so turn down the instrument ...

Rear Panel

Plug the power adapter in here.

The **FOOT SWITCH** may be connected to any momentary pedal, to engage the BYPASS function.

...or the **TRIM** control here on the back panel.

The **ModLink connectors** let you arrange several ModFX units in a chain, without having to use input and output cables inside the chain.

INPUTS and OUTPUTS are standard 1/4" line-level jacks. Plug single-channel devices into the LEFT/MONO input.

If you're using a ModLink chain, you only need to connect to the first unit's input, and the last unit's output.

Connections

Unpacking and Inspection

Your Philtre was packed carefully at the factory. The shipping carton was designed to protect the unit during shipping. Please retain this container in the highly unlikely event that you need to return the Philtre for servicing.

The shipping carton should contain the following items:

- Philtre with the same serial number as shown on the shipping carton
- Power Adapter
- This instruction manual

To register your purchase, go to the Alesis website at www.alesis.com.

Installing in a Rack

The Philtre is designed for tabletop use, but can also be installed in a standard 19" audio equipment rack. For rack mounting, contact your Alesis dealer for the ModFX Rack. This rack shelf holds three ModFX units in a 3-space high 19" rack.
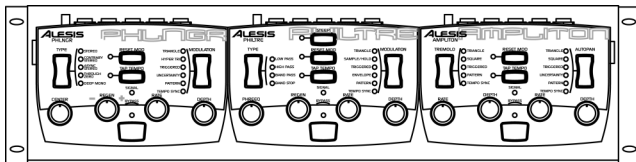
Power

The Philtre comes with an AC power adapter that transforms the voltage from a standard outlet into 9 volts AC (830 mA). Plug the small end of the power adapter cord into the Philtre's POWER 9VAC socket and then plug the adapter itself into a good quality, noise-free AC power source of the proper rating.

The supplied AC line adapter is designed only for the destination to which the unit is shipped. To use the Philtre in another country, contact your Alesis dealer for a P3 adapter suitable for the electrical system in the country you are traveling to.

Make sure you read the initial Important Safety Instructions chapter at the front of this manual.

Avoid "popping":
Don't plug the power adapter into the Philtre until all other audio cables have been hooked up. Make sure your amplifier or powered speakers are switched off when plugging in the Philtre to avoid damage.

Connecting audio

The Philtre will work in many different applications, whether you are connecting an instrument directly into it, or connecting it through a mixing console. But since the Philtre is a stereo effect unit, it's important to know whether the source will be stereo or mono.

Mono In, Mono or Stereo Out

If you're connecting a guitar or bass directly to the Philtre, hook it up this way:

1. Connect a 1/4" phone cord to the [LEFT/MONO] INPUT of the Philtre from a mono source. (The Left input will then feed both inputs of the effect.)

2. Connect another 1/4" phone cord from the LEFT OUTPUT of the Philtre to an amplification system or mixer input.

3. **If the amp or mixer is stereo,** connect a second 1/4" phone cord from the RIGHT OUTPUT of the Philtre to the other input of the stereo amplification system, or the next mixer input.

4. If you're connecting directly to a stereo mixer, pan the two channels hard left and hard right to get the maximum effect.
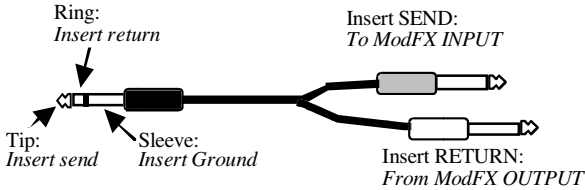
When connecting audio cables and/or turning power on and off, make sure that all devices in your system are turned off and the volume controls are turned down.

Turn up the trim...

Most guitars and basses have relatively low output levels. For the quietest effect, turn up the volume on the guitar to full, then crank up the [TRIM] control on the back of the Philtre until the SIGNAL LED on its top panel flashes red while you play, then back it off a bit.

Connecting to the Channel Inserts of a mixing console:

Most recording consoles have a jack near the mic and line inputs labeled "Insert". This is typically a TRS jack with the send and return on the same jack. To use the Philtre as a channel insert, you will need an insert cable (not included).

Ring:
Insert return

Insert SEND:
To ModFX INPUT

Tip:
Insert send

Sleeve:
Insert Ground

Insert RETURN:
From ModFX OUTPUT

This cable splits the TRS insert jack into two unbalanced mono connectors. Usually, the tip is connected to the INPUT of the Philtre and the ring is connected to the OUTPUT of the Philtre. However, this may be reversed on some recording consoles. Check your mixer's Reference Manual to be sure or just try it both ways – this won't damage the Philtre.

Channel Insert

ModFX In   ModFX Out
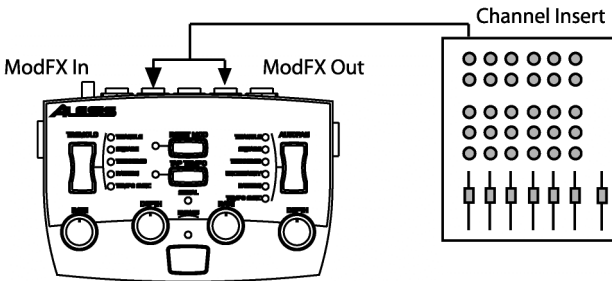
For stereo operation, you would use two insert cables, inserted into two adjacent channels of the mixer. One would send and receive signal to the left channel of the Philtre, and the pan pot of that mixer channel would normally be panned to the left. Pan the next mixer channel, for the right side of the Philtre, to the right.

Connecting to the Main Outputs of a mixing console:

In addition to channel inserts, most mixing consoles have main insert jacks near the main outputs. You can use insert cables to connect the Philtre to the main L/R bus the same way you connect it to a pair of channels. Simply connect one insert cable to the left main insert of the mixer, and connect the two mono jacks to the left INPUT and OUTPUT of the Philtre. Use another insert cable to connect the right main insert to the right INPUT and OUTPUT of the Philtre.

Alternatively, you could plug the mixing console's main outputs directly into the Philtre's inputs, then feed the Philtre's outputs to your monitor amps or mixdown recorder. However, with this method if you fade down the volume at the end of the song, the sound quality may change as you fade. That's why it's better to use insert jacks, if they're available.

Connecting to the Aux Send/Return of a mixing console:

The Philtre, like other filters and equalizers, is designed for in-line processing, not for the send/receive kind of processing typically used for reverb units. However, plugging a group out or pre-fader Aux send from a mixer into the Philtre will allow you to process a mix of several instruments, from any mixer channel that has its aux send raised or is assigned to that group. The essential point is that the Aux send should be the pre-fader type, not an "effect send". There shouldn't be any direct (post-fader) signal in the main mix from any channels going through the Philtre.

To do this, connect a single cable from the Aux Send Out (sometimes labeled "Aux Out") to the [LEFT/MONO] input of the Philtre. Use two separate cables to connect the [LEFT OUTPUT] and [RIGHT OUTPUT] of the Philtre to the left and right inputs of a stereo Effect Return, or to two adjacent mixer channels panned to left and right.

If you use mixer channels for the returns from the Philtre, be sure the Aux Sends or group assignments for those channels are turned all the way off to avoid feedback.

From Aux/Eff Send

To returns

ModFX In   ModFX Out
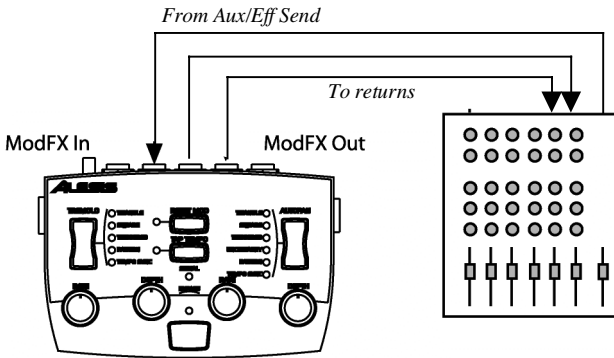
Connecting to the inserts on an instrument amplifier:

The insert send on a guitar or bass amp is usually labeled "effects send and return" or "insert send and return". This allows you to preamplify your instrument before phasing it and sending it to the power amp.

Most guitar amps are single channel, so connect a single insert cable (see page 19) from the amp to the LEFT INPUT and LEFT OUTPUT of the Philtre. Some amps have separate "effect send" and "effect return" jacks; for these, use standard cables. Check the manual of your amplifier for details.

Never connect the Philtre between the power amp and the speaker!
The high power levels created by the power amp will destroy the circuitry of the Philtre.

Effects Send

ModFX In   ModFX Out
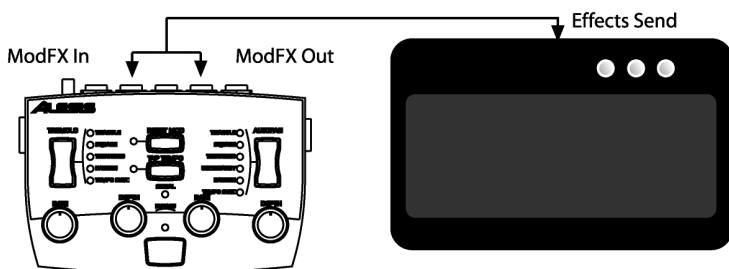
If you are using a dedicated rack-mount preamplifier, another method would be to insert the Philtre between the preamp and the input(s) of the power amp.

Connecting to equipment with XLR inputs and outputs:

If you are connecting the Philtre to a product with XLR balanced inputs and outputs, you will need to convert this signal to a 1/4" unbalanced connector. Make sure that **Pin 2** of the XLR connector is connected to the **Tip** of the 1/4" adapter or cable.

Watch out for high levels, however: some XLR sources put out levels close to the maximum the Philtre can accept (about +12 dBu) even when its trim is at minimum. Lower the level of the source if the [SIGNAL] LED flashes red.

About audio cables

The connections between the Philtre and your studio are your music's lifeline, so use only high quality cables. These should be low-capacitance shielded cables with a stranded (not solid) internal conductor and a low-resistance shield. Although quality cables cost more, they do make a difference.

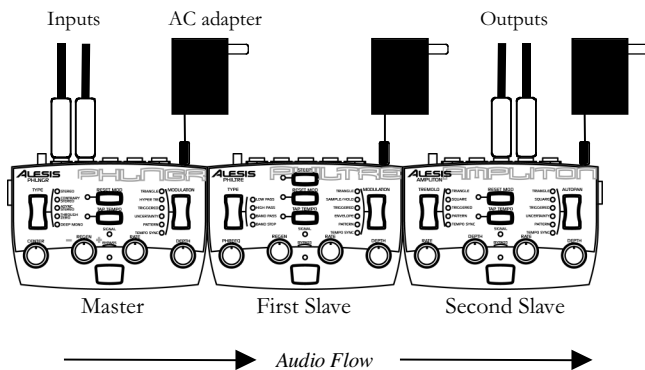Route cables to the Philtre correctly by observing the following precautions:

- Do not bundle audio cables with AC power cords.

- Avoid running audio cables near sources of electromagnetic interference such as transformers, monitors, computers, etc.

- Do not place cables where they can be stepped on. Stepping on a cable may not cause immediate damage, but it can compress the insulation between the center conductor and shield (degrading performance) or reduce the cable's reliability.

- Avoid twisting the cable or having it make sharp, right angle turns.

- Never unplug a cable by pulling on the wire itself. Always unplug by firmly grasping the body of the plug and pulling directly outward.

> ### Don't use line transformers:
> *Many XLR-to-1/4" adapters sold at electronics stores are NOT adapters, but transformers (and very low quality transformers at that). Don't use these on the output of the Philtre—they're unnecessary and generally sound awful because they don't have the headroom to handle the Philtre's output. Get a hard-wired adapter or cable from your professional audio dealer, or make one yourself from components.*

Using the ModLink

The Philtre can be connected to other effect boxes in the ModFX family via the ModLink. The ModLink is a cable-free connection between two ModFX units that transfers digital audio and word clock. The 9-pin male connector on the left side of the unit is the ModLink IN port. The 9-pin female connector on the right side is the ModLink OUT port. By directly connecting two ModFX units via the ModLink, audio and power will pass from the left-most unit to the right-most unit.

***What about the 1/4"
jacks on the slave
units?***

*When a unit is a slave to
another unit, **its audio input
jacks are disabled**; it will get
its audio input digitally from
its ModLink port. The output
jacks, however, are always
active; so an audio output
can be tapped from any
linked unit, without
interrupting the flow to the
rest of the chain.*

Inputs   AC adapter   Outputs

Master   First Slave   Second Slave

Audio Flow

The audio signal flows from left to right. The Master will send its digital audio output to the First Slave, and the First Slave will, in turn, send its output to the Second Slave.

3 Using the Philtre

This section defines the different kinds of filters and modulations, and explains the functions of the Philtre's controls in greater detail. The technical information in the next few pages will help you get the most out of your gear...it's really pretty simple.

What is filtering?

An audio filter is a special kind of tone control that filters out certain frequencies. Just as a water filter lets water through but stops dirt and rust particles, audio filters let the frequencies you want flow through, while stopping the rest. Every kind of audio equipment has filtering or filter sections in it. If you have two-way speakers in your studio, each tweeter is protected by a *high-pass filter* that lets the treble through while keeping the bass out (so you don't blow the tweeter), and the woofer may be connected to a *low-pass filter* that keeps the high frequencies out. If you have three-way speakers, a *band-pass filter* lets only the midrange frequencies get through to the midrange driver.

While most filters are used for equalization and crossovers, engineers discovered that powerful filters moved around dynamically could be a useful and creative special effect. The Philtre falls into this special class of filters, that includes wah-wah pedals and voltage-controlled filters on synthesizers.

Filter curves, orders, and slopes

When you look at a graphic display of their frequency response, every filter has a *slope*—gentle or steep, like the slope of a hill. The *passband*—the frequency range that the filter lets through—looks like a flat plateau. The frequency at the edge of that plateau, just as the response starts to go downhill, is called the *corner frequency*. Then, the frequency response goes down at a particular slope, measured in decibels per octave. The slope is determined by the number of components or *poles* in the filter. A simple single-pole filter, the gentlest kind, rolls off frequencies at a rate of 6 dB/octave above its corner frequency; a four-pole filter is a much steeper 24 dB/octave.

In the Philtre, the PHREEQ control determines the corner frequency, and the STEEP switch allows you to quadruple the slope. The REGEN control increases gain at the corner frequency, further changing the filter characteristics. You hear this at high settings as the filter beginning to "whistle" as the harmonics near the corner frequency all begin to peak together due to phase addition; this is also called *resonance* or "Q".

Modulating the filter frequency

All the rest of the controls on the right-hand side of the Philtre are designed to *modulate* or dynamically change the filters' corner frequencies. If the DEPTH control is at minimum, and you move the PHREEQ control around by hand, you'll hear the effect of changing the corner frequencies. The Modulation section of the Philtre essentially does the same thing: it moves the frequency of the filter around dynamically, under control of an LFO (Low Frequency Oscillator). Not only does the Philtre give you a lot of modulation options, it can automatically synchronize the movement of the filter frequency with the speed of the music using the Tempo Sync features.

What is Tempo Sync?

Three of the five mod sources in the Philtre have a repeating cycle over time (Triangle, Sample/Hold, and Pattern). Sometimes, you'll want the rate of that cycle to match the beat of your music instead of being random. For example, you can set the rate so that the sweep of the filter completes each cycle once per measure, or to a tremolo-like effect that happens in sixteenth notes. The TEMPO SYNC feature of the Alesis ModFX series not only lets you set a tempo naturally by tapping on the TAP TEMPO button, it can automatically adjust its speed slightly relative to the audio input, after setting the basic speed using the TAP button.

To use Tempo Sync:

You can set the Philtre to TEMPO SYNC mode as follows:

1. Press the down side of the [MODULATION] rocker switch to select the next modulation type.

    You can see the type of effect by the LED lit next to the name—for example, TRIANGLE, SAMPLE/HOLD, ENVELOPE and so on.

2. Keep pressing the rocker switch through all the normal modes until you enter TEMPO SYNC mode, and then advance to the type of modulation you want.

    Both the Mod Type and TEMPO SYNC LEDs will be lit. For example, if you press the down side of the rocker switch when you're in PATTERN mode, the Philtre will go to TRIANGLE/TEMPO SYNC mode. At this point, the TAP TEMPO LED will start flashing at the last speed it was set to (or the default of 120 bpm).

3. Tap the [TAP TEMPO] button several times to set the desired tempo.

    The TAP TEMPO LED will flash in time to the hits. As long as the [RATE] control is in the center position, the modulation speed will match the tempo.

4. If the tempo isn't quite right, "tap" a steady, discrete beat on any instrument connected to the input. The internal processor will then synchronize the tapped tempo with the audio input. The processor will make slight alterations to the tempo such that it stays synchronized with the beat of the audio input.

> **The RATE knob is different in Tempo sync mode**
>
> *In TEMPO SYNC mode, the RATE knob acts as a multiplier to the speed set by TAP TEMPO, so you can't get the tempo to change slightly by adjusting that knob. Note that changes to RATE won't affect the flashing of the TEMPO LED.*

To turn Tempo Sync off:

Simply press the UP side of the [MODULATION] switch repeatedly until the Tempo Sync LED goes off, then select the modulation waveform you want.

Description of Controls

Rate

The [RATE] knob changes the filter modulation speed. When the mod source is set to ENVELOPE it affects the attack and release time of the envelope, in TRIGGERED mode it affects the release time. In all other modes it affects the LFO (low frequency oscillator) speed.
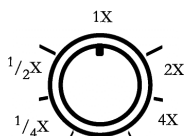
See the descriptions of the Modulation sources for more complete details of how [RATE] relates to each type.

In normal modulation modes (TEMPO SYNC LED <u>off</u>), turning the [RATE] knob alters the rate continuously from very slow to very fast. Turn the knob clockwise for a faster speed, counter-clockwise for a classically-slow sweep.

Rate knob operation in TEMPO SYNC mode

When the Philtre is in TEMPO SYNC mode, the fundamental modulation speed is set by the TAP TEMPO function, and the rate knob is used to adjust that rate to an even fraction or multiple of the current tempo:

See the description of TAP TEMPO for important tips on using this feature.

• With the knob indicator in the 12 o'clock position, the mod rate will be the same as tempo (one cycle per quarter note).

• Turn the knob to the left to set the mod rate to half of the tempo (i.e., one cycle per half note), or full counter-clockwise to set it to a quarter of the tempo (once per measure).

• Turn the knob to the right to set the modulation to twice the tempo (eighth notes), or all the way to four times the tempo (sixteenth notes).

The diagram below shows where you can set the [RATE] knob to modulate the filter at different multiples of the tempo during TEMPO SYNC mode.

This diagram does not apply when the mod source is set to ENVELOPE or TRIGGERED.

Depth

The [DEPTH] knob controls how much modulation will be applied to the filter frequency. Turn the knob clockwise for a deeper effect. Turning [DEPTH] all the way counter-clockwise turns modulation off completely, leaving the filter fixed at the [PHREEQ] position. Depth interacts with the [PHREEQ] control (see next page).

Unlike some other effects, [DEPTH] in the Philtre doesn't decrease the amount of filtered signal in the mix; that's a constant. Instead, it controls how much the frequency of the filter will be moved up and down by the modulation source.

Phreeq

The [PHREEQ] knob changes the corner frequency of the Philtre's high pass and low pass filters, and the center frequency of the band pass and band stop filters. Its effect varies depending on the filter type, the setting of the [STEEP] switch, and the [REGEN] control, as will be explained later.

To hear how PHREEQ works for yourself, turn [DEPTH] all the way off, and move [PHREEQ] manually while listening. Try all four filter types. Turn [REGEN] up until you can hear a tone, and experiment with raising the [DEPTH] control at different [PHREEQ] settings.

LOW PASS: Frequencies <u>above</u> the [PHREEQ] setting will be rolled off. Turn clockwise to let more high end through.

HIGH PASS: Frequencies <u>below</u> the [PHREEQ] setting will be rolled off. Turn counter-clockwise to let more low end through.

BAND PASS: Frequencies <u>above and below</u> the band centered at the [PHREEQ] setting will be rolled off. The width of the band is set by the [REGEN] control; if [REGEN] is at minimum the bands are so far apart that moving [PHREEQ] may not have an audible effect except near the maximum or minimum settings.

BAND STOP: Frequencies <u>within</u> the band centered at the [PHREEQ] setting will be rolled off. Again, the width of the band is set by [REGEN]: at the minimum setting, almost the entire audio range may be rolled off, and at the maximum setting only a narrow notch.

Regen

The [REGEN] knob does several different things depending on the filter type. But in each filter it increases the amount of filter resonance (how much gain is added near the corner frequency), which creates a peak in the response as shown below:

[REGEN] at minimum

[REGEN] at maximum

- To increase resonance, turn [REGEN] clockwise.
- For no resonance (REGEN <u>off</u>), turn [REGEN] counter-clockwise.

Regen in Band Pass and Band Stop modes

In addition to its resonance function, the [REGEN] knob adjusts the width of the bands in Band Pass and Band Stop filters.

In BAND PASS mode, with [REGEN] set to minimum, the high and low corners of the band are extremely far apart, so that on program material without much low or high end there may be little audible effect (depending on the setting of the PHREEQ knob). As you increase the [REGEN] setting, the low pass filter corner moves down, and the high pass filter moves down, making the middle "plateau" narrower and narrower. At the maximum [REGEN] setting, with the addition of filter resonance, the Band Pass filter essentially becomes a narrow notch filter with a very high "Q":

Band Pass: Low [REGEN]   **Band Pass: High [REGEN]**

- To make the band narrower, turn [REGEN] clockwise.

In BAND STOP mode, with [REGEN] set to minimum, the band that is being attenuated is relatively wide. As you increase the [REGEN] setting, the stop band gets narrower. At the maximum setting, with the addition of filter resonance, the Band Pass filter essentially becomes a narrow notch filter with a high "Q", like a parametric EQ set to its narrowest setting:

Band Stop: Low [REGEN]   **Band Stop: High [REGEN]**
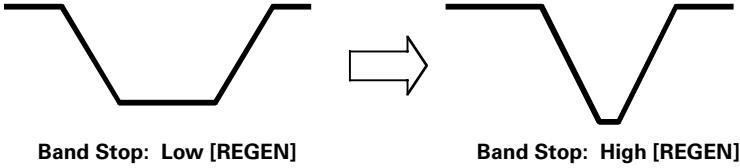
• To make the band stop filter narrower, turn [REGEN] clockwise.

Modulation Select Switch

The up/down rocker switch on the right side of the unit selects the modulation source for the Philtre. The LEDs next to the switch light up to indicate the current mode. There are five kinds of modulation available, explained below. The rocker switch also selects TEMPO SYNC mode, as explained earlier.

Triangle

This mode uses a triangle wave to modulate the filter effect. Use this when you want the filter to move up and down in regular, smooth waves.
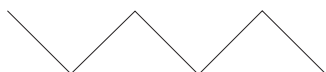
Sample/Hold

This mode selects a sample and hold wave for the filter's modulation. The filter's center frequency will jump randomly around the center setting, holding a setting until it's time for the next one. The left and right channel filter settings are randomly set apart from each other, creating an interesting stereo effect.
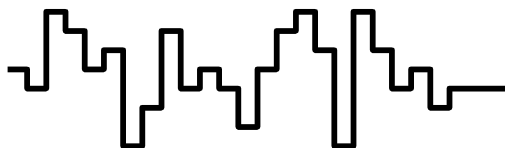
Triggered

This is one of the most useful effects in the Philtre for lead players. Instead of using a repeating wave or LFO, the filter is kept low (at the point set by the [PHREEQ] control) until there's an accent in the incoming signal. An accent (a sudden increase above the average input audio level) is called a *trigger*. This trigger "fires" an envelope wave with a fast attack at the filter frequency, so it's like using a synthesizer's VCF (voltage controlled filter) on the audio input. Pressing the [RESET MOD] button will also cause a trigger.

The decay time of the trigger (how long it takes after an accent for the filter to close down again) is set by the [RATE] control: the trigger will be very short when [RATE] is turned full clockwise, and longer when turned "down" (counter-clockwise).

Note that since there's no repeating waveform in Triggered mode, the TEMPO SYNC/TAP TEMPO features have no effect.
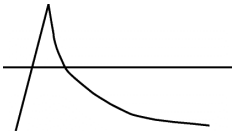
Trigger reacts directly to your playing

With a little practice and some careful level adjustment of your instrument, you'll adjust to the feel of how loud you have to play to generate a trigge, and how soft to play to keep the filter from triggering.

Triggering with a volume pedal

With sustained sounds, you can trigger the Philtre by using a volume pedal, or the volume knob on the instrument itself. Try it!

Envelope

Like Trigger, Envelope modulation takes its cue from the input signal instead of using a periodic wave. In Envelope mode, the filter frequency follows the average amplitude envelope of the incoming signal—the louder you play, the higher the filter frequency will move. Envelope is used in "auto-wah" effects, and for making dynamics more pronounced.

How quickly the filter responds to level changes in the incoming input is controlled by the [RATE] knob. The most obvious effect of the [RATE] control is to slow down the attack time of the envelope. In this sense, Envelope is the opposite of Trigger: on similar inputs, Envelope "swoops up" where Trigger would "swoop down". However, it's actually more complex than that. Think of the [RATE] control as being a "shock absorber" on how quickly the filter frequency will follow the changes in level of incoming sound. At low [RATE] settings, the filter responds slowly, both up and down. At midrange settings, it more quickly moves, in sync with individual notes. At the highest range, the filter almost jitters as it tries to follow the envelope of the incoming signal exactly.

In this mode, TEMPO SYNC/TAP TEMPO features have no effect.
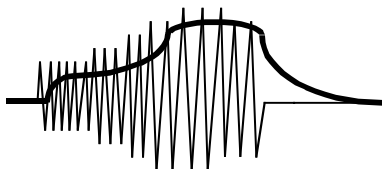
> ### *Rate settings are the key to Envelope mode*
> *At low [RATE] settings, the filter will gradually open up only if you play several notes in a row—like you were turning an EQ knob during a crescendo. Above the "12 o'clock" setting, the envelope will follow each note, making the characteristic "analog synthesizer" sound.*

Pattern

This mode randomly generates a 16-step sequence to modulate the filter and repeats it over and over. Pattern mode makes the filter jump quickly from step to step, sometimes with a glide between steps. It sounds somewhat like "sample and hold" modulation, except that the pattern will step through the same 16 steps over and over, instead of being random.

• Press the [RESET MOD] button to generate a new 16-step pattern.

• Try using the [RATE] knob, or the TEMPO SYNC/TAP TEMPO features, to make the steps of the pattern play in sync with your music. Keep in mind that the pattern has 16 steps per 4 beats, so adjust the RATE knob accordingly.

RATE in Pattern mode

You can think of Pattern mode as being 4x the rate of the other modulation sources. In Tempo Sync mode, turn the [RATE] knob full clockwise (1/4 speed) to get one step per beat, the same as Triangle at a 12 o'clock setting of [RATE].

TYPE Rocker Switch

The up/down rocker switch on the left side of the unit selects the type of filter. The LEDs next to the switch light up to indicate the current type. There are four types available, explained below.

Low Pass

Perhaps the most-popular type of filter effect, the Low Pass filter has a 2-pole, 12 dB per octave slope that cuts the high frequencies above the corner frequency set by the [PHREEQ] knob. Most synthesizer filters are low pass filters, as are wah-wah pedals.
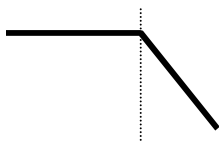
When [STEEP] is on, the Low Pass filter slope increases to 8-pole, rolling off the high frequencies at a rate of 48 dB per octave.

High Pass

The High Pass filter has a 2-pole, 12 dB per octave slope that cuts the low frequencies below the corner frequency set by the [PHREEQ] knob. The most common use of high pass filters is to cut rumble out of microphones; as an effect they can create an intentionally-thin "transistor radio" sound by cutting out the low frequencies.
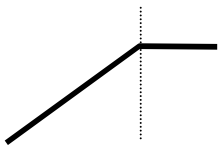
When [STEEP] is on, the High Pass filter slope increases to 8-pole, rolling off low frequencies at 48 dB per octave.

Band Pass

The Band Pass filter has two 2-pole, 12 dB per octave slopes: one rolling off high frequencies above the center, and another rolling off low frequencies below the center. It's like a high pass filter combined with a low pass filter, with the corners set to let the midrange through. The distance between the two slopes is set by the [REGEN] knob: the band lets most of the audible frequency spectrum through at the lowest [REGEN] setting, and narrows considerably at full clockwise rotation (see page 30 for an illustration of this).

When using modulation, a Band Pass filter is often used when you want an effect similar to Low Pass, but you don't want the high end to disappear completely as the filter center moves towards the low end. Acoustically, it mimics the effect of sound being pointed in different directions, toward and away from the listener, as in a rotary speaker or the "helicopter" effect.

When [STEEP] is on, the Band Pass filter slopes increase to 8-pole, or 48 dB per octave. This steep slope isn't as obvious as in other filters, however, if the band is set relatively wide.
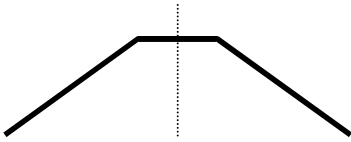
Band Stop

The Band Stop filter is the reverse image of the Band Pass filter. Instead of preserving the frequencies in the midrange near the center, it cuts them off, so only the edges are heard. The distance between the two slopes is set by the [REGEN] knob: the band is fairly wide at the lowest [REGEN] setting, and becomes a *notch filter* at full clockwise rotation (see page 31 for an illustration of this). When you modulate a Band Stop filter, the sound will alternate between cutting out the low mids, and the upper mids, while leaving the extreme high and low frequencies (if the PHREEQ knob is at the center).
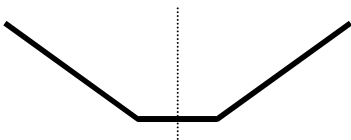
When [STEEP] is on, the Band Stop filter slopes increase to 8-pole, or 48 dB per octave.

Steep

For a more dramatic filter effect, press the [STEEP] button. [STEEP] quadruples the number of filter poles being used. This means that more frequencies are rejected, and if [REGEN] is turned up, the resonance effect is more pronounced.

Here is a chart of the effect of the [STEEP] button:

Normal slope	Steep slope
2 pole (12 dB/octave)	8 pole (48 dB/octave)

Reset Mod

Press this button to reset the phase of the filter modulation source as follows:

- In TRIANGLE mode, press [RESET MOD] to start the wave from the top of its phase.

- In TRIGGERED mode press this button to generate a fast-attack trigger envelope to momentarily open the filter, even when the audio signal hasn't generated its own trigger.

- In PATTERN mode press this button to generate a new 16-step pattern.

Tap Tempo

This button affects the speed of the effect whenever the [MODULATION] switch is set to a TEMPO SYNC mode. At any time you can tap this button along with the music to set a new tempo. The Tap Tempo light will flash at the current tempo.

Tap Tempo technique

For a reliable tempo setting, make several taps in a row at a consistent speed, especially if you're changing the tempo drastically. Watch the flashing of the light to see the current tempo of the Philtre.

Adjusting tempo with audio input

After the basic tempo has been set using the [TAP TEMPO] button, the Philtre will automatically make <u>small</u> adjustments to its tempo by "listening to" the audio input. You try this out by "tapping" on an instrument (playing sharp chords, or beats, without sustain or notes inbetween) at almost the same speed as the Philtre's tempo LED, or by slightly changing the speed of a drum machine feeding the inputs. The Philtre can derive a beat from a complex musical input, as long as it is reasonably close to the original "tapped" tempo. The tempo can adjust up or down about 15% from the original tempo tapped in.

How Tap Tempo works with Tempo Sync and the Rate knobs

When TEMPO SYNC mode is enabled, the rate of the modulation will be based on the tempo currently being flashed, multiplied by the position of its [RATE] knob: when it's in the middle position (around "12 o'clock"), the speed of the triangle, sample/hold, or the pattern, will be the same as the tempo. (Tap Tempo has no effect on Triggered or Envelope modulations.) See the earlier descriptions of the [RATE] knob and Tempo Sync for more information.

> **To get fast modulations...**
>
> *it isn't necessary to tap at a high speed if you want the effect to modulate at eighth or sixteenth notes. Just tap on the quarter-note beat, then turn the [RATE] knob to the right to double or quadruple the speed made by Tap Tempo.*

Bypass

This button sends the signal directly from the input to the output without any effect. Press [BYPASS] to check the sound of the source without any effect from the Philtre. When the red BYPASS LED is lit, phasing is turned off. The Bypass function can also by activated by the foot switch.

Since the Philtre is a digital effect, signal always passes through the digital A/D–D/A conversion process, so that digital signal will flow through to other effects in a ModLink chain even when [BYPASS] is on. So, unlike old analog effects, this is not a "hardwire" bypass switch—the Philtre must be powered on to pass signal through, even in bypass mode. Similarly, the [TRIM] control is always active, since it's an analog control regulating the level feeding the analog-to-digital converters.

Using the Foot Switch

If you need to bypass the effect but your hands aren't free, simply connect any momentary footswitch (such as those used for keyboard sustain pedals, either NC normally closed or NO normally open) to the [FOOT SWITCH] jack on the rear panel. The footswitch will turn the BYPASS LED on and off.

Sample Settings

While there's nothing like discovering new sounds for yourself, we thought it would be a good idea to provide some sample settings of the Philtre to help get you started. Simply set the knobs on your Philtre so they're at the positions shown, and press the rocker switches so each effect is in the mode shown by the LEDs. Feel free to modify these any way you want to suit your particular playing style.
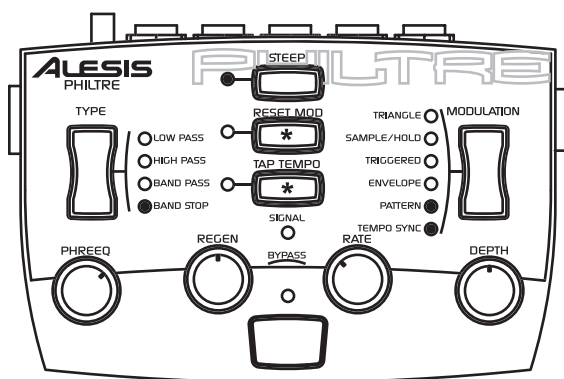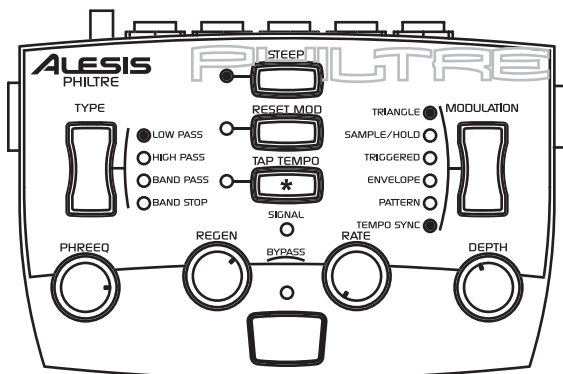

Ghost in the Fog
Good on program material; murky with moments of clarity. Press [RESET MOD] to change the pattern, and [TAP TEMPO] to synchronize to the beat
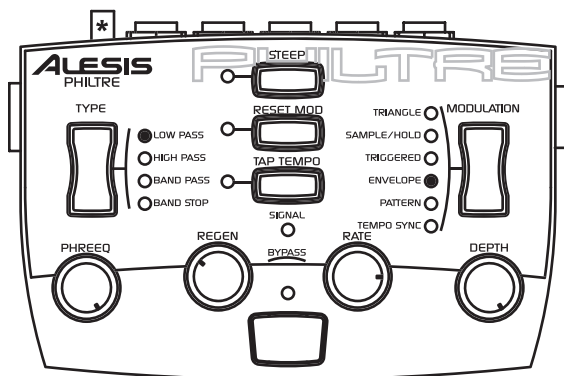
Auto Wah
*The envelope follower creates the auto wah effect automatically as you play; use the [INPUT TRIM] * knob to fine-tune the effect.*

Slow Sweep

Hit [TAP TEMPO] on the downbeat of every 2nd bar, and this setting will open and close the filter over two bars.
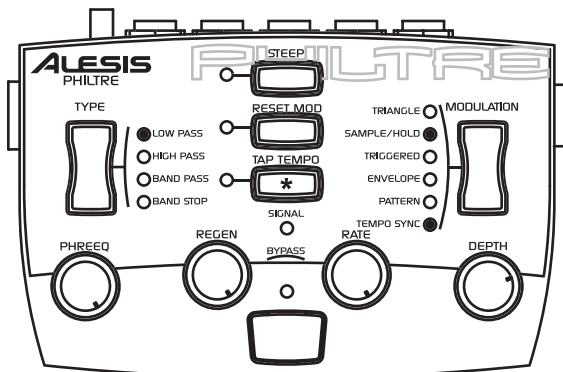
Sample and Hold

A classic sample and hold sound that follows the time of the music, with sixteenth notes at this setting, if you hit [TAP TEMPO] in quarter notes.
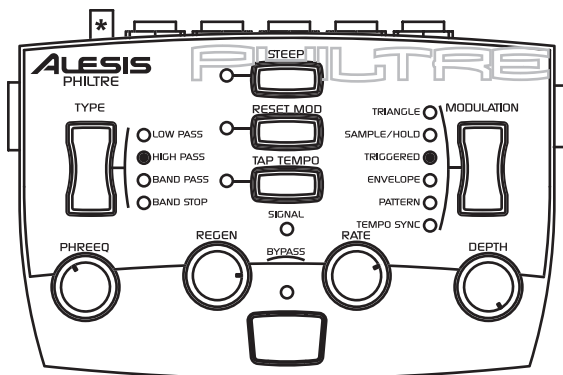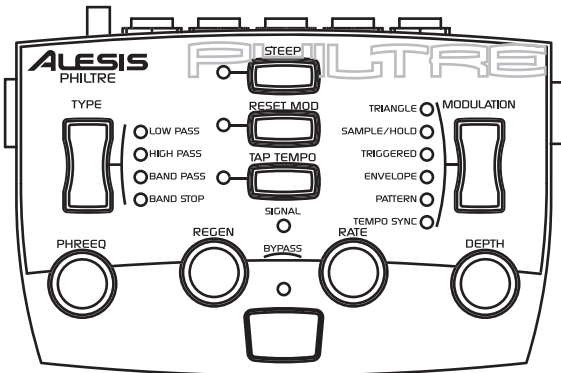
Triggered Zap

A resonant high pass "zap" sound triggered from the audio input. Use the [INPUT TRIM] to tune the trigger threshold.
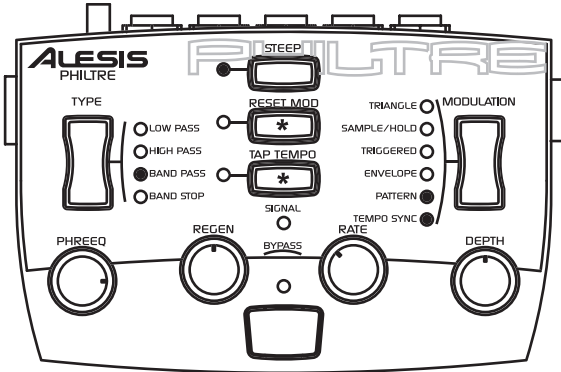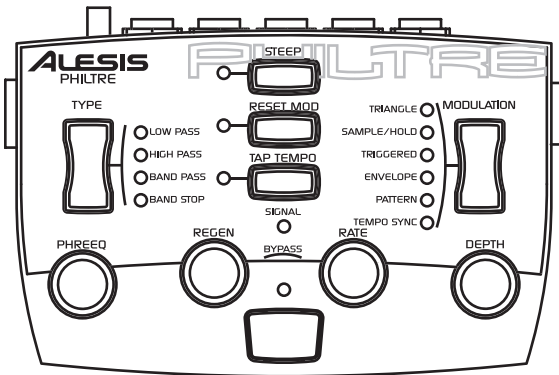
Band Passion

The band pass filter moves in time with the music in this setting. Tap quarter notes into [TAP TEMPO], and press [RESET MOD] to change the pattern.
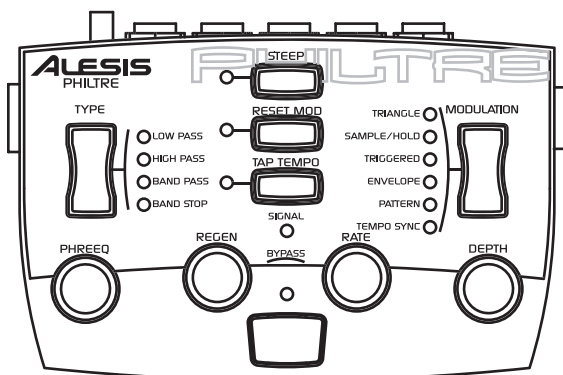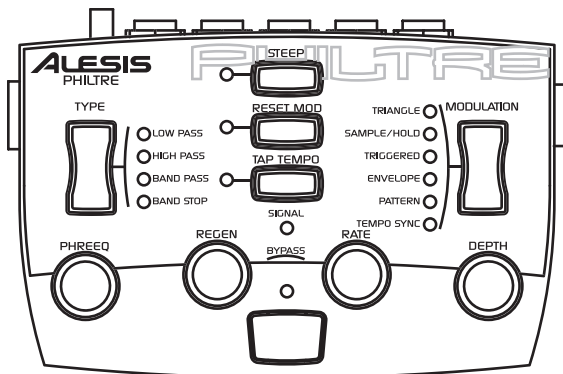
Blank

Fill in your own favorite settings here. Photocopy the next page if you need more space.

Blank Settings Templates
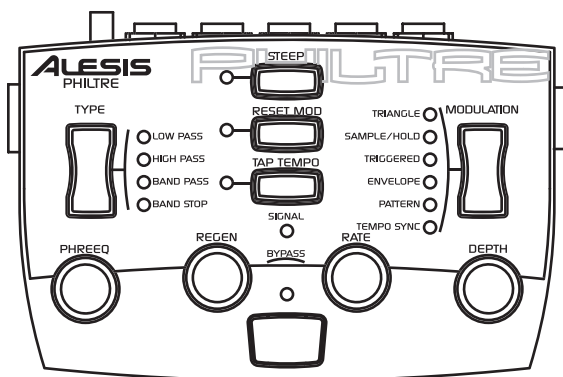
5 Troubleshooting

Troubleshooting Index

If you experience problems while operating your Philtre, please use the following table to locate possible causes and solutions before contacting Alesis Product Support for assistance.

Symptoms	Cause	Solution
No audio outputs.	No input audio(SIGNAL LED doesn't flash).	Test with a known good input.
	Bad cables.	Replace the cables.
	Destination is turned down.	Check the connections and the level of the mixer or amp that the Philtre is connected to.
	[INPUT TRIM] knob is turned down	Adjust the knob to the proper level.
	[PHREEQ] is at minimum in Low Pass mode	Adjust the knob to the proper level, or use another filter mode
	In Envelope mode, not receiving enough level, and [DEPTH] is at maximum	Increase input signal, change [PHREEQ] and/or [DEPTH], or increase [RATE].
	Input cables are connected to a linked unit	Connect the input cables to the Master of the link chain
	Power is not connected	Go take a walk
[TAP TEMPO] button is not working	Not in Tempo Sync mode	Select Tempo Sync mode
ModLinked units are not working properly	Power dropout to one of the units in the chain	Plug in a power supply to every unit in a chain.
Distorted sound	Input level too high (SIGNAL LED on front panel flashes red)	Turn down the source, or the TRIM control on the Philtre's back panel.
Sounds thin, no bottom end	[PHREEQ] knob is set high, in High Pass mode	Change the settings
Buzz or hum from outputs	Audio cables are crossing a power cable or a power adapter.	Make sure that the Philtre and its audio cables are kept away from power cables and wall warts. Don't wrap cable in tight bundles.
	Problem with the source	Try bypassing the Philtre by connecting the input cables to the output cables and see if the problem remains.
	Bad cables	Replace the cables

Symptoms	Cause	Solution
AC hum	Ground loop	Place all equipment in the studio on a common ground (see next page)
Whistles or tones in output	[REGEN] set too high	Reduce [REGEN] setting, or turn [STEEP] off
Can't hear Envelope	[RATE] set too low to track input	Set [RATE] to the middle of its range, or change the TYPE.

Avoiding ground loop noise

In today's studio, where it seems every piece of equipment has its own computer chip inside, there are many opportunities for ground loop problems to occur. These show up as hums, buzzes or sometimes radio reception and can occur if a piece of equipment "sees" two or more different paths to ground. While there are methods to virtually eliminate ground loops and stray radio frequency interference, most of the professional methods are expensive and involve installing a separate power source just for the sound system. Alternatively, here are some helpful hints that professional studio installers use to keep those stray hums and buzzes to a minimum.

KEEP ALL ELECTRONICS OF THE SOUND SYSTEM ON THE SAME AC ELECTRICAL CIRCUIT.

Most stray hums and buzzes happen as a result of different parts of the sound system being plugged into outlets of different AC circuits. If any noise generating devices such as air conditioners, refrigerators, neon lights, etc., are already plugged into one of these circuits, you then have a perfect condition for stray buzzes. Since most electronic devices of a sound system don't require a lot of current (except for power amplifiers), it's usually safe to run a multi-outlet box or two from a SINGLE wall outlet and plug in all of the components of your system there.

KEEP AUDIO WIRING AS FAR AWAY FROM AC WIRING AS POSSIBLE.

Many hums come from audio cabling being too near AC wiring. If a hum occurs, try moving the audio wiring around to see if the hum ceases or diminishes. If it's not possible to separate the audio and AC wiring in some instances, make sure that the audio wires don't run parallel to any AC wire (they should only cross at right angles, if possible).

TO ELIMINATE HUM IF THE ABOVE HAS FAILED:

1. Disconnect the power from all outboard devices and tape machines except for the Philtre, the mixer and control room monitor power amp.

2. Plug in each tape machine and outboard effects device one at a time. If possible, flip the polarity of the plug of each device (turn it around in the socket) until the quietest position is found.

3. Make sure that all of the audio cables are in good working order. Cables with a detached ground wire will cause a very loud hum!!

4.   Keep all cables as short as possible, especially in
     unbalanced circuits.

If the basic experiments don't uncover the source of the problem,
consult your dealer or technician trained in proper studio
grounding techniques. In some cases, a "star grounding" scheme
must be used, with the mixer at the center of the star providing the
shield ground on telescoping shields, which do NOT connect to
the chassis ground of other equipment in the system.

Line conditioners and spike protectors

Although the Philtre is designed to tolerate typical voltage
variations, in today's world the voltage coming from the AC line
may contain spikes or transients. These can cause audible noises,
and they can stress your gear and, over time, possibly cause a
failure. There are three main ways to protect against this, listed in
ascending order of cost and complexity:

- **Line spike/surge protectors.** Relatively inexpensive,
  these are designed to protect against strong surges and
  spikes, acting somewhat like fuses in that they need to
  be replaced if they've been hit by an extremely strong
  spike.

- **Line filters.** These generally combine spike/surge
  protection with filters that remove some line noise
  (dimmer hash, transients from other appliances, etc.). A
  good example is the Isobar™ series from Tripp Lite.

- **Uninterruptible power supply (UPS).** This is the
  most sophisticated option. A UPS provides power even
  if the AC power line fails completely. Intended for
  computer applications, a UPS allows you to complete an
  orderly shutdown of a computer system in the event of a
  power outage. In addition, the isolation it provides
  from the power line minimizes all forms of
  interference—spikes, noise, etc.

Care and Maintenance

Cleaning

Disconnect the AC cord, then use a damp cloth to clean the
Philtre's metal and plastic surfaces. For heavy dirt, use a non-
abrasive household cleaner such as Formula 409™ or Fantastik™.
DO NOT SPRAY THE CLEANER DIRECTLY ONTO THE
FRONT OF THE UNIT AS IT MAY DESTROY THE
LUBRICANTS USED IN THE SWITCHES AND CONTROLS!
Spray onto a cloth, then use cloth to clean the unit.

Refer all servicing to Alesis

We believe that the Philtre is one of the best signal processors that
can be made using current technology, and should provide years of
trouble-free use. However, should problems occur, DO NOT
attempt to service the unit yourself unless you have training and
experience. Service on this product should be performed only by
qualified technicians. NO USER-SERVICEABLE PARTS
INSIDE.

Obtaining repair service

Before contacting Alesis, check over all your connections, and make sure you've read the manual.

Customers in the USA and Canada:

If the problem persists, contact Alesis and request the Product Support department. Make sure you have the unit's serial number with you. Talk the problem over with one of our technicians; if necessary, you will be given a return order (RO) number and instructions on how to return the unit. All units must be shipped prepaid and COD shipments will not be accepted.

For prompt service, indicate the RO number on the shipping label. **Units without an RO will not be accepted.** If you do not have the original packing, ship the unit in a sturdy carton, with shock-absorbing materials such as Styrofoam pellets (the kind without CFCs, please) or "bubble-pack" surrounding the unit. Shipping damage caused by inadequate packing is not covered by the Alesis warranty.

Tape a note to the top of the unit describing the problem, include your name and a phone number where Alesis can contact you if necessary, as well as instructions on where you want the product returned. Alesis will pay for standard one-way shipping back to you on any repair covered under the terms of this warranty. Field repairs are not authorized during the warranty period, and repair attempts by unqualified personnel may invalidate the warranty.

Customers outside the USA and Canada:

Contact your local Alesis distributor for any warranty assistance. The Alesis Limited Warranty applies only to products sold to users in the USA and Canada. Customers outside of the USA and Canada are not covered by this Limited Warranty and may or may not be covered by an independent distributor warranty in the country of sale. Do not return products to the factory unless you have been given specific instructions to do so.

Specifications

Audio Input

Input Connectors:	2 unbalanced 1/4" jacks
Maximum Input Level:	+10 dBV
Nominal Level:	-10 dBV
Input Impedance:	470kΩ
Input Converter Resolution:	24-bit, 48 kHz sampling

Audio Output

Output Connectors:	2 unbalanced 1/4" jacks
Maximum Output Level:	+9 dBV
Output Impedance:	500Ω
Output Converter Resolution:	24-bit, 48 kHz sampling

Audio Performance
(Analog In to Analog Out)

Signal To Noise Ratio:	>100 dB A-weighted
THD+N:	< 0.005%
Frequency Response:	± 1dB from 22Hz to 22kHz
Internal DSP Resolution:	28-bit
Power Consumption:	7 Watts max (9VAC Alesis P3)

Mechanical

Size:	2.1" H x 5.8" W x 3.9" D (53mm H x 148mm W x 98mm D)
Weight:	12.6oz. (357 g)

6 Specifications

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Index

Warranty / Contact Alesis

Alesis Limited Warranty

ALESIS CORPORATION ("ALESIS") warrants this product to be free of defects in material and workmanship for a period of one (1) year for parts and for a period of one (1) year for labor from the date of original retail purchase. This warranty is enforceable only by the original retail purchaser and cannot be transferred or assigned. For the most effective service, the purchaser should register the purchase on the ALESIS website at http://www.alesis.com/support/warranty.htm.

During the warranty period ALESIS shall, at its sole and absolute option, either repair or replace free of charge any product that proves to be defective on inspection by ALESIS or its authorized service representative. In all cases disputes concerning this warranty shall be resolved as prescribed by law.

To obtain warranty service, the purchaser must first call or write ALESIS at the address and telephone number available on the Alesis Website to obtain a Return Authorization Number and instructions concerning where to return the unit for service. All inquiries must be accompanied by a description of the problem. All authorized returns must be sent to ALESIS or an authorized ALESIS repair facility postage prepaid, insured and properly packaged. Proof of purchase must be presented in the form of a bill of sale, canceled check or some other positive proof that the product is within the warranty period. ALESIS reserves the right to update any unit returned for repair. ALESIS reserves the right to change or improve design of the product at any time without prior notice.

This warranty does not cover claims for damage due to abuse, neglect, alteration or attempted repair by unauthorized personnel, and is limited to failures arising during normal use that are due to defects in material or workmanship in the product.

THE ABOVE WARRANTIES ARE IN LIEU OF ANY OTHER WARRANTIES OR REPRESENTATIONS WHETHER EXPRESS OR IMPLIED OR OTHERWISE, WITH RESPECT TO THE PRODUCT, AND SPECIFICALLY EXCLUDE ANY IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY OR OTHER IMPLIED WARRANTIES. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

IN NO EVENT WILL ALESIS BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT OR OTHER DAMAGES RESULTING FROM THE BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING, AMONG OTHER THINGS, DAMAGE TO PROPERTY, DAMAGE BASED ON INCONVENIENCE OR ON LOSS OF USE OF THE PRODUCT, AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THIS CONTRACT SHALL BE GOVERNED BY THE INTERNAL LAWS OF THE STATE OF CALIFORNIA WITHOUT REFERENCE TO CONFLICTS OF LAWS. This warranty gives you specific legal rights, and you may also have other rights required by law which vary from state to state.

This warranty only applies to products sold to purchasers in the United States of America or Canada. The terms of this warranty and any obligations of Alesis under this warranty shall apply only within the country of sale. Without limiting the foregoing, repairs under this warranty shall be made only by a duly authorized Alesis service representative in the country of sale. For warranty information in all other countries please refer to your local distributor.

For more effective service and product update notices, please register your Philtre online at:
http://www.alesis.com/support/warranty.htm

Alesis Contact Information

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Los Angeles, CA USA

E-mail: support@alesis.com
Website: http://www.alesis.com

Alesis Philtre Reference Manual
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