

t.c. electronic SCF

**TC STEREO
CHORUS/FLANGER
& Pitch Modulator**



USER'S GUIDE

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INTRODUCTION

Thank you for purchasing the TC Chorus/Flanger/Pitch Modulation pedal. TC Electronic has developed this product to the highest standards ensuring top sound quality with no noise or distortion added to your audio signal.

The "full" spatial effects and the lack of noise has made the TC SCF pedal a favorite choice of many professional musicians both on the road and in the studio.

From the cast aluminum housing to the internal power supply you will see that professional quality is the trademark of TC Electronics products. We hope you enjoy your purchase !

INTRODUCTION

Features:

- 3 types of stereo effects

The 3 kinds of effects are all **stereo effects**, but can be used in mono as well. The effects are suitable for all electric or electrified instruments and will in no way compromise the tonal quality of the instrument.

Chorus

A chorus is basically a pitch generator which mixes multiple delay signals. When the multiple delay signals are mixed with the original signal a soft and wide sounding modulation effect is created.

FLANGER

A flanger is based on the same principle as a chorus, although here the signal can be regenerated (like adding feedback on a delay) creating a more distinctive sounding effect.

INTRODUCTION

Pitch Modulation:

A combination of chorus and pitch - vibrato which creates a "light" chorus sound.

Real Stereo

When using stereo the effect signals and the clean signal appear simultaneously in both sides. The effect signals are alternating phase reversed in left and right sides, creating a unique spatial dimension.

Excellent dynamic range

The 100dB signal to noise ratio means that there is very little background noise generated by the electronics. This high signal to noise ratio is very unusual for pedal effects, and makes this device appropriate for any kind of recording.

Preamp + Line Driver

The TC SCF can be used with almost any instrument/amplification. Its built-in preamplifier can handle even the weakest signals e.g. from some keyboards, mixers and transducer pickup. High signal output allows long cable runs with full signal.

SCF SOUND QUALITY

Frequency response 20-20.000Hz

The wide frequency response is one of the reasons why the SCF pedal sound much better than any other effect pedals of this type.

Linear frequency response

The linear frequency response of the TC Stereo Chorus/Flanger ensures that the sound stays transparent and clear, and that there will be full effect from the deepest bass note to the highest harmonics. Rather than cutting off the precious harmonics of your signal, the harmonics are processed when the pedal is activated, and allowed to pass completely unaffected when it is bypassed

DYNAMIC RANGE: 100dB

A dynamic range of 100dB means that the SCF is extremely silent as well as being capable of handling the dynamics of your signal. - No hiss but all the "punch" you need. With no noise added, your music will keep its transparency and brightness so soft passages are clear and rich in harmonics.

SCF SOUND QUALITY

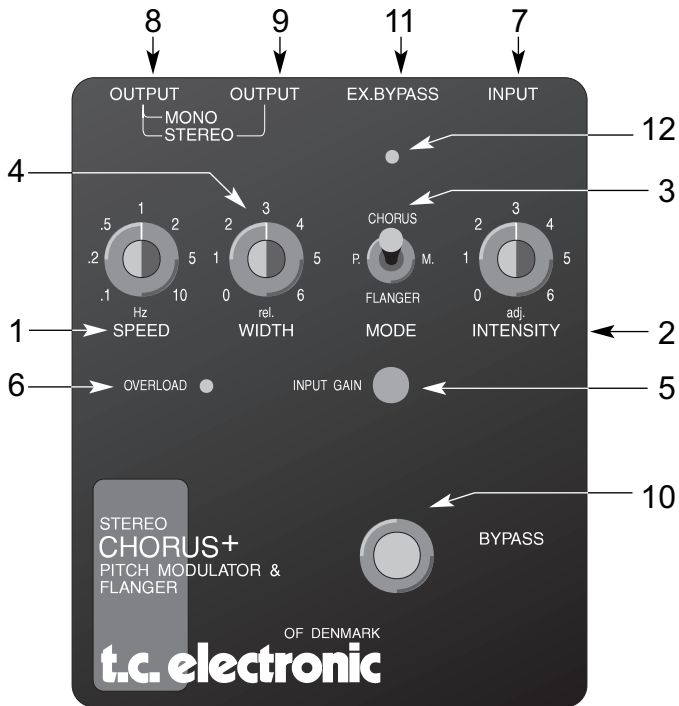
PROFESSIONAL SIGNAL LEVELS

One of the key elements to obtaining professional sound quality is proper impedance at the in and output(s). If an effect pedal should be able to pick up the full bandwidth from your instrument, it is very important that it does not "load" your instrument, i.e. it must have a high input impedance.

To prevent loss through cables, effect loops or loading by the amp input, the outputs must have drive capability, i.e. the out impedance has to be very low. Due to the high input and the low output impedance, TC effects do not "steal" any detail of your signal, neither with the effect on, nor when bypassed!

SUPERIOR CIRCUITRY

The SCF circuit uses the latest technology of circuitry to give uncompromised sound and dependable service. The chorus circuit has been refined by many years of experience by the TC engineers to make the TC Chorus/Flanger sound "state of the art" ! The components used were chosen for professional applications so you can expect years of service free durable performance from your SCF pedal.



FRONT DESCRIPTION

- 1 SPEED** Controls the Rate of sweep in a range from 1 sweep every 10 seconds to 10 sweeps each second (0,1-10 Hz).
- 2 INTENSITY** The INTENSITY potentiometer has 3 functions - one for each mode:
- In the CHORUS mode it blends between chorus and clean signal.
 - In FLANGER mode it controls the strength of the Comb filter phasing of the signal (like feedback on a delay).
 - In PITCH MODULATION mode it is blend control, mixing chorus and vibrato.
- 3 MODE SELECTOR** Switches between the 3 modes of operation: CHORUS, PITCH MODULATION (P.M.) and FLANGER.

FRONT DESCRIPTION

- 4 WIDTH** Determines how wide a modulation (sweep) is produced. Ranges are from "0" (no modulation) to "6"(max) on a relative scale.
- 5 INPUT GAIN** Controls the gain of the built-in preamplifier. Ranges from 0dB (no amplification) to +15dB (= 5 times amplification).
- 6 OVERLOAD** Indicates when the TC SCF is close to being overloaded. Adjust for occasional peak indication.
- 7 INPUT JACK** High impedance input. Connect your instrument here.
- 8 OUTPUT (MONO)** Outputs a monophonic effect signal or, if both outputs are used, the left channel of the stereo signal.

FRONT DESCRIPTION

- 9 OUTPUT (STEREO)** Outputs the right channel of the stereo effects signal.
- 10 BYPASS** Switches the audio signal into or around the effects circuitry.
- 11 EX. BYPASS** By connecting a simple momentary switch here, the bypass function can be remote controlled.
- 12 LED INDICATOR** The LED at the top of the unit indicates the sweep rate (as set by SPEED) with effect on. In BYPASS mode the LED "glows" at a low levels indicating "power on".

GETTING STARTED

Connect the input source (instrument, pick-up or high output microphone) by a mono jack cord to the Input jack.

The amplification used (amp(s), mixer) should be connected by a mono jack cord(s) to: Output jack if you are using one amp or a mono mixer. Both Output jacks - if you are using two amps or a stereo mixer.

The TC SCF has a built-in power supply, which should be connected to an AC "wall outlet".

THE CONTROLS

There are four sound controls on the SCF:

INPUT GAIN, SPEED, WIDTH and INTENSITY

Setting Input Gain:

Using the TC SCF with an instrument...

When used with a guitar, bass or keyboard with normal output volume and an amplifier with normal input volume the INPUT GAIN should be turned fully counter clockwise. (The signal will then have an unchanged level).

Or...using the TC SCF with a mixing console.

The AUX/EXT. EFFECTS SEND on the mixing console should connect to the SCF input and drive with a 0dB signal level. The INPUT GAIN on the TC SCF should be adjusted so the LED lights on the peaks of the input signal only. The SCF outputs should be connected to "LINE" input on a mix module or the effects return module.

THE CONTROLS

Note:

If both outputs are used for stereo, you must use a stereo return on the mixing console. Do not mix the stereo outputs of the TC SCF together! If you do, you will get no effect, as the effects part of the signal is out of phase on the LEFT/RIGHT OUTPUT.

SETTING SPEED AND WIDTH

The SPEED and the WIDTH should be regarded as a set of controls rather than two individual. They both influence the apparent degree of effect. A good starting point when creating more "pleasant" sounds in any of the 3 effect modes is to keep the controls "generally opposite". Here is an example:

SPEED at "2", WIDTH at "5" or

SPEED at "5", WIDTH at "1".

THE CONTROLS

If you want "out of pitch" sounds for special effects, both SPEED and WIDTH can be turned into the last third of their range.

Adjusting INTENSITY

This has 3 different functions depending on the mode setting...

In the CHORUS mode INTENSITY is a control for the "notching" depth of the chorus effect. Turning the control clock-wise increases the "notching" which is well suited for non distorted single and rhythm guitars as well as most keyboards. With chorus effects applied to song and generally when the sound is more of a bass character, lower settings should be used. When using the unit through returns on a mixing console keep the INTENSITY control at maximum.

THE CONTROLS

In PITCH MODULATION mode, the INTENSITY control mixes an increasing amount of pitchshift (vibration, following the speed rate) over the chorus signal. If the control is turned fully clockwise the chorus part of the signal is at minimum. The effect is most pronounced at high speed settings, and applicable to give e.g. a keyboard sound a "leslie-like" character.

In FLANGER mode, INTENSITY controls the amount of signal which is regenerated. More regeneration creates a "deeper" more metallic sound.

EXAMPLES OF SETTINGS

NAME	SPEED	INTENSITY	MODE	WIDTH
CHORUS I	1	4	CHORUS	3
CHORUS II	2	5/6	CHORUS	5
CHORUS III	5	2	CHORUS	5
FLANGER I	2	3	FLANGER	5
FLANGER II METALLIC	2	2	FLANGER	2
FLANGER CLASSIC	4	4	FLANGER	1
FLANGER	.5	3.5	FLANGER	MAX
PITCH MOD.	.5	5	P.M.	2

TECHNICAL SPECIFICATIONS

Dynamic Range	100dB
Frequency response	20-20kHz
Input impedance	1 Mohm
Output impedance	500 ohm
Max Input level	+9dBm
Input gain range	0 to +15dB
Max Output level	+14dBm
Distortion	<0.1%
Delay	max 15ms
Phaseshift	at 1kHz, max 27k deg.
Noise reduction	fast action, 2:1 slope
Power	200-240V or 100-120V
Size	(LxWxH-mm) 124 x 98 x 31

TROUBLESHOOTING

In case you encounter any difficulties, please go thru this troubleshooting before calling the service center

ERROR

CHECK

No "on" LED

- click the bypass footswitch.
- is there sound?
- try another AC outlet.

No Sound

- AC outlet OK?
- try to get sound through your amp. without using the TC SCF.
- are the cables ok? Try others.

- move all switches back and forth.
- try another sound source.
- test in mono (see chorus problem).

TROUBLESHOOTING

ERROR

CHECK

Distortion

INPUT GAIN adjusted too high - 0dB max should be put in - install an input attenuator if necessary - try another signal source - try another cable - does the OVERLOAD LED light?

Chorus Effect

Do not mix the two outputs together disappears these are in anti-phase. To make a mono-compatible effect,

- 1) Use one output only or
- 2) With a "splitbox" you can connect the direct signal to the input of the SCF as well as to Left side of the stereo, the SCF Stereo Out jack to the RIGHT side. Now, set the MODE switch at P.M. and

TROUBLESHOOTING

INTENSITY at or near maximum.
This set-up will produce a chorus effect, which is almost as "broad" and is mono-compatible however the chorus effect will be at one side only.

- 3) Use another TC product called the TC 1210 Spatial Expander & Stereo Chorus/Flanger, which has two linkable chorus units for full stereo/mono compability as well as other exciting effects.

NOTES

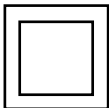
Please read and follow these instructions before connecting this unit.



The lightning flash with an arrowhead symbol within a equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



This symbol indicates that the unit is double insulated.

NOTES

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.

NOTES

The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to identify and Resolve Radio/TV interference Problems." This booklet is available from the US. Government Printing Office, Washington, DC 20402, Stock No. 004-000-0034-4.

Caution

You are cautioned that any change or modifications not expressly approved in this manual could void your authority to operate this equipment.

Warning!

To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.

Service

All service must be performed by qualified personnel. Servicing is required when:

- the unit has been damaged in any way, such as power-supply cord or plug is damaged
- the unit has been exposed to rain or moisture, or liquid has been spilled into the unit
- objects have fallen into the unit
- the unit does not work properly
- the unit has been dropped

NOTES

Do not attempt servicing of this unit yourself. Always refer to qualified personal.

Do not use this unit near water; for example, near a bath tub, washbowl, kitchen sink, laundry tub, in wet basement or near a swimming pool ect.

This unit should only be connected to correct power supply outlet, please refer to the technical specifications.

For the customers in Canada:

This Class B Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

NOTES

Certificate Of Conformity

TC Electronic A/S, Sindalsvej 34, 8240 Risskov, Denmark, hereby declares on own responsibility that the **TC SCF Pedal** covered by this certificate and marked with CE-label conforms with following standards:

- | | |
|------------|--|
| EN 60065 | Safety requirements for mains operated Electronic and related apparatus for household and similar general use. |
| EN 55103-1 | Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use.
Part 1: Emission. |
| EN 55103-2 | Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use.
Part 2: Immunity. |

With reference to regulations in following directives:
73/23/EEC, 89/336/EEC

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*Anders Fauerskov
Managing Director*