

MASELEC

MTC-1X

Stereo Mastering Transfer Console

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The **MTC-1X** measures 3 U height with a depth 'behind panel' of 260mm and 10kg weight. The front control surface has 43 push-button controls with LED lights and 12 high quality rotary switches. Gold XLRs are used for all audio connections, assisting the use of highest quality cables. Connecting and rearranging external equipment is very easy.

The **MTC-1X** is structured into four different sections:

<p>1. The Input section:</p> <ul style="list-style-type: none"> Input source selection Phase invert for left and right Separate Left and Right gain controls (1/2dB steps) 5dB additional gain selectable for low level sources Low-cut and High-cut filters Independent Cut controls for left and right 	<p>3. The Output section:</p> <ul style="list-style-type: none"> Separate Left and Right gain controls (1/2dB steps) Elliptical filter with 20 frequencies * Stereo Width control; from mono to extra wide * Output Cut control <p>* The stereo image circuits are identical to the famous controls of the MTC-2.</p>
<p>2. The Insert section has six insert points and offers additional powerful functions:</p> <ul style="list-style-type: none"> M-S with gain control for the 'difference' signal Inserts 1 & 2 equipment swap (FLIP) Insert 4 or Inserts 2-4 cross-fade or additive mix with the use of a rotary switch. This function could be used for 'parallel' compression or adding reverb Inserts 4 & 5 equipment swap (FLIP) Insert 6 can be moved to Post Output. This is the preferred position for a brick-wall limiter. 	<p>4. The Monitor section:</p> <ul style="list-style-type: none"> 4 external Monitor Sources Monitor of the Input and Output sections 2 speaker feeds 0 to 10dB, 1/2dB steps, offset trim for inputs S1 and S2 Monitor of the Stereo-, Left-, Right-, Mono- or Difference- signal Individual Cut controls for Left and Right speakers Progressive Dim function Meter output, with -6dB, -8dB and -10dB offsets

1. Input Section

1.1 Input Source.

Switches S1 and S2 select input SOURCE.
This is independent of the MONITOR selection which is located at the right hand side of the panel.

1.2 Input Phase.

The PHASE of the input source can be reversed by depressing either LEFT or RIGHT switches making it possible to change the polarity of both channels. The phase reverse function does not extend the signal path or use any additional circuitry.

1.3 Input Gain.

The input GAIN is controlled by a rotary switch with discrete precision resistors. The range is +/-5dB with 0.5dB steps. The +5dB switch engages a fixed increased gain on both channels without extending the signal path.



1.4 Input Cut

The two CUT switches cuts the signal at the input.
This function could be useful for setting up and adjusting processing equipment in the inserts.

1.5 Low Cut Filter

The LOW cut filter has a 12 dB/octave slope. It has a sharper 'knee' at lower frequencies to optimise the subjective performance.

Frequencies: 20Hz, 25Hz, 30Hz, 40Hz, 50Hz and 60Hz.

1.6 High Cut Filter

The HIGH cut filter has a 12dB/octave slope with a gentle 'knee' for the higher frequency settings. This makes even the 27kHz filter useful for normal CD (44.1K) preparation.

Frequencies: 12kHz, 14kHz, 16kHz, 18kHz, 22kHz and 27kHz.

2. INSERTS

2.1 Insert Select

Inserts in/out is selected with six large push buttons. The insert section is totally bypassed unless at least one insert is in circuit. This ensures that the signal path is as pure as possible.

2.2 Gear Flip.

The GEAR FLIP function switches the position of the equipment connected to the XLR connectors on the back of the MTC-1X. It does not alter the position of the inserts. When FLIP 1 and 2 is engaged Insert 1 is still the first insert in the chain. This function is also active when M-S is selected. Flip 4 and 5 works in a similar way.

2.3 Post Output

The POST O.P. function moves insert 6 to post the output section. This positions the insert between the output amplifiers and the output XLRs. The monitor of the output is picking up the signal from the XLR connectors and correctly monitors the output signal, post insert 6, when this function is used.

2.4 Insert 1 M-S

INS 1 M-S converts the signal in Insert 1 to MS (sum and difference). Left channel = Sum and Right channel = Difference. When this function is engaged the difference signal gain can be adjusted ± 1 dB with a rotary switch. The DIFF GAIN control is located after the insert. The Flip 1 and 2 can be used together with the M-S function.

2.5 Insert 4 Mix

The INS 4 MIX function makes it possible to mix processed signals with the main signal. This is done with the 23 position rotary switch. The Mix function can be configured in two ways:

2.5.1 Cross-Fade.

The control cross-fades between processed (after insert 4) and non-processed (before insert 4) signals. The output level remains constant in all positions (if the two levels are the same). This is probably the most convenient way of mixing the signals.

2.5.2 Add

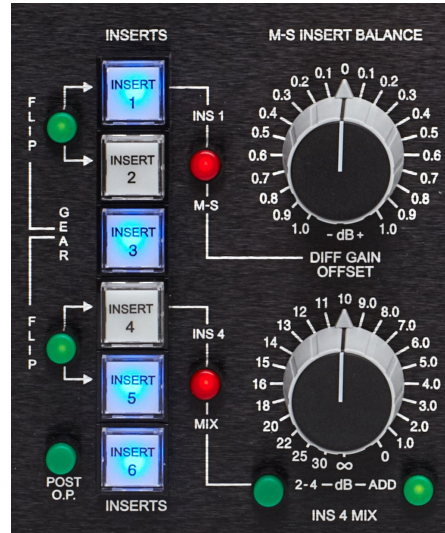
With this control engaged the signal from insert 4 is added to the main signal, much like a reverb return on a mixing console. This could be useful when adding an effect or a separate signal to the main programme.

2.6 2-4

When the 2-4 control is engaged, the signal processed in insert 2, insert 3 and insert 4 is mixed with the non-processed signal before insert 2. Only the inserts that are in circuit will of course be mixed. If none of these three inserts are in circuit the mix control is totally bypassed.

Together with the FLIP function the INS 4 MIX is a very flexible and powerful tool and could be used for parallel processing, using the equipment in up to three different inserts.

The headroom of the MTC-1X is not affected by this function.



3. Output Section

3.1 Output Gain

The output GAIN is controlled by a rotary switch with discrete precision resistors. The range is $\pm 5\text{dB}$ in 0.5dB steps.

3.2 Output Cut

The output CUT controls both channels.

3.3 Image

The IMAGE circuit consists of two functions. Both are controlled with rotary switches.

3.3.1 Elliptical Filter

This FILTER cuts signals that are out of phase and converts non-correlated signal components to mono below the frequency that the control is set to.

For example: If a signal below the set frequency is only appearing on one side, it is moved to the centre position (mono).

3.3.2 Stereo Width

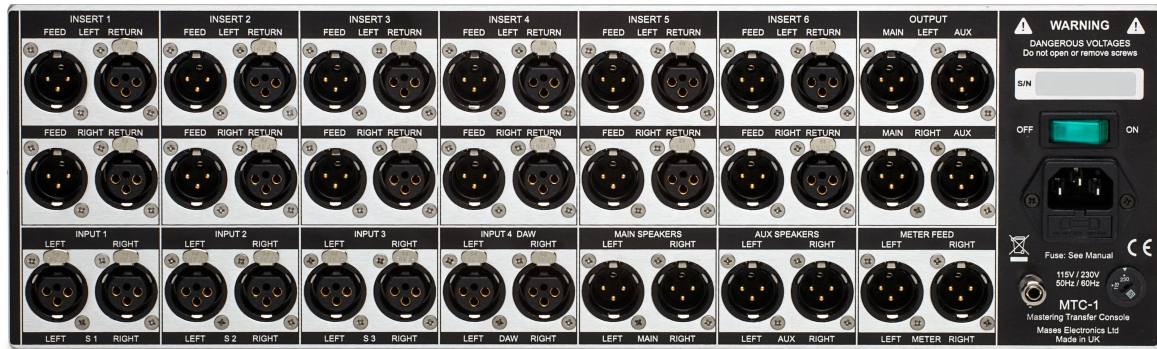
The WIDTH control adjusts the image in 2 steps, from mono to extra wide stereo, without altering the mono signal. This control does not use an M-S circuit but can be used to further adjust the image when the M-S function is used in Insert 1.

The image controls are essential tools for vinyl disc cutting but are equally useful for other applications. Both controls are totally mono compatible and do not change the mono signal.

The MTC-1X headroom is not affected by the image controls.



5. Back Panel



5.1 Audio Connections

All audio connections are via 3 pin Gold Plated Neutrik metal house XLR connectors.

All input output circuits are fully balanced.

Pin 2 or Pin 3 can be grounded to convert to unbalanced.

Either Pin 2 or Pin 3 can be used as hot (there is no difference in performance).

Maximum signal level: +28dBu (balanced)

5.2 Mains Power

CAUTION!

Before mains power is connected to the IEC connector on the back panel:

Always make sure that the voltage switch is set to the correct voltage!

The MTC-1X has two power switches:

- Back panel: Mains power on/off
- Front panel (above the monitor volume control): Power on/off Blue LED indicator.

The front control switches the power off to all circuits (standby).

Fuse: 1.25AT (slow blow)

The **EARTH** plinth on the back panel is connected to the case and the audio ground.

WARNING!

Do not open the case or remove any screws: There are **DANGEROUS VOLTAGES** inside!

Always refer servicing to qualified personnel.