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SPIRIT FOLIO *Si*

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SPIRIT FOLIO
PRODUCT GUIDE

Si



STEREO INPUT L & R

Accept 3-pole 'A' gauge (TRS) jacks. Use these inputs for sources such as keyboards, drum machines, synths, tape machines or as returns from processing units. The inputs are UNBALANCED. You can feed both channels in mono by connecting to the LEFT jack only.

EQUALISER - HF EQ

Turn to the right to boost high (treble) frequencies, adding crispness to cymbals, pianos and other electronic instruments. Turn to the left to cut these frequencies, reducing hiss or distorted consonants which can occur with vocals. Set the knob in the centre-detented position for a neutral EQ response.

EQUALISER - OVERVIEW

The Equaliser (EQ) allows fine manipulation of the sound, to improve the quality of source signals which may perhaps have a lot of background noise, or to alter the character of synthesised voices from electronic instruments.

There are three sections (HF, MID & LF) giving the sort of control usually only found on much larger mixers. The EQ knobs can have a dramatic effect on the sound, so use them sparingly and listen carefully to the result.

SENSITIVITY

Most professional equipment uses input and output levels of +4dBu, but semi-professional tape machines use a low level of -10dBV (or hi-fi systems 100mV). This control allows you to trim the input sensitivity across a range of 20dB to suit a wide variety of different input sources.

EQUALISER - MID EQ

This control provides boost (clockwise) or cut (anticlockwise) of Mid frequencies, allowing some truly creative improvement of, for instance, many synthesised wind instruments or vocals which fall within this range. This control can have a dramatic effect on the sound, so listen carefully to find out how particular characteristics of a signal may be enhanced or reduced. Set the knob to the centre-detented position for a neutral response.

EQUALISER - LF EQ

Turn to the right to boost low (bass) frequencies, adding warmth to organ or wind voices or extra punch to synths, guitars and drums. Turn to the left to reduce hum, boominess or improve a mushy sound. Set the knob to the centre-detented position for a neutral EQ response.

BALANCE

This control sets the amount of the channel signal feeding the Right and Left MIX outputs, allowing you to balance the source in the stereo image. When the control is turned fully right or left you feed only that side of the signal to the mix.

PFL

When the latching PFL (Pre-Fade-Listen) switch is pressed a mono sum of the pre-fade channel signal is fed to the monitor output or headphones, replacing the normal source (either Mix or Tape Return). You use this switch to listen to a channel signal without affecting the mixer outputs, to check the signal quality or simply to check that it is there!

AUX SEND 1

This is used to set up a separate mono mix for FOLDBACK or to drive EFFECTS PROCESSORS, and the combination of all the Aux 1 Sends is mixed to the Aux 1 Output. For Effects it is useful for this to fade up and down with the FADER (this is called POST-FADE), but for Foldback or Monitor feeds it is important for the send to be independent of the FADER (this is called PRE-FADE).

The Master Section AUX1 PRE switch allows you to choose pre- or post-fade as required. Leave the knob turned fully to the left when not in use.

AUX SEND 2

This is similar to the Aux Send 1 control, but is always POST-FADE.

FADER

The linear FADER gives you smooth control of the overall signal level in the channel strip, allowing precise balancing of the various source signals being mixed to the Master Section. It is important that the input level is set correctly to give maximum travel on the fader. See the 'Initial Setting Up' section on page 10 for help in setting the right level.

SPIRIT FOLIO *Si* STEREO INPUT CHANNELS 1-12

MIC INPUT

Accepts XLR-type connectors and is designed to suit a wide range of **BALANCED** or **UNBALANCED** signals. Professional dynamic, condenser or ribbon mics are best because these will be **LOW IMPEDANCE**. You can use low-cost **HIGH IMPEDANCE** mics, but the level of background noise will be higher.

If you turn the **PHANTOM POWER** on (top right-hand side of the mixer) the socket provides a suitable powering voltage for professional condenser mics. Unplug any mics if you want to use the **LINE Input**. Set the input level using the **GAIN** knob.

GAIN

This knob sets how much of the source signal is sent to the rest of the mixer.

Too high, and the signal will distort as it overloads the channel.

Too low, and the level of any background hiss will be more noticeable and you may not be able to get enough signal level to the output of the mixer. See 'Initial Setting Up' to learn how to set the **GAIN** correctly.

LINE INPUT

Accepts 3-pole 'A' gauge (TRS) jacks. Use this input for sources other than mics, such as keyboards, drum machines, synths, tape machines or guitars. The input is **BALANCED** for low noise and immunity from interference, but you can use **UNBALANCED** sources by wiring up the jacks as shown on page 11, although you should then keep cable lengths as short as possible. Unplug anything in the **MIC** input if you want to use this socket. Set the input level using the **GAIN** knob.

EQUALISER - HF EQ

Turn to the right to boost high (treble) frequencies, adding crispness to cymbals, vocals and electronic instruments. Turn to the left to cut these frequencies, reducing hiss or distorted consonants which can occur with certain types of microphone. Set the knob in the centre-detented position for a neutral EQ response.

EQUALISER - OVERVIEW

The Equaliser (EQ) allows fine manipulation of the sound, particularly to improve the quality of vocals where microphone technique or position can often result in a signal which is far from ideal. There are three sections (HF, MID & LF) giving the sort of control usually only found on much larger mixers. The EQ knobs can have a dramatic effect on the sound, so use them sparingly and listen carefully to the result.

EQUALISER - MID EQ

There are two knobs which work together to form a **SWEPT MID EQ**. The lower knob provides boost and cut, just like the HF EQ knob, but the frequency at which this occurs is set by the upper knob over a wide range. This allows some truly creative improvement of the signal in live situations, because this mid band covers the range of most vocals. Listen carefully as you use these controls together to find how particular characteristics of a vocal signal can be enhanced or reduced. Set the lower knob to the centre-detented position for a neutral EQ response.

AUX SEND 1

This is used to set up a separate mix for **FOLDBACK**, **EFFECTS** or recording, and the combination of all the **Aux 1 Sends** is mixed to the **Aux 1 Output**. For **Effects** it is useful for this to fade up and down with the **FADER** (this is called **POST-FADE**), but for **Foldback** or **Monitor** feeds it is important for the send to be independent of the **FADER** (this is called **PRE-FADE**). The **Master Section AUX1 PRE** switch allows you to choose pre- or post-fade across the whole mixer as required. Leave the knob turned fully to the left when not in use.

100HZ HI-PASS FILTER

Pressing this switch reduces the level of bass frequencies only. This feature is very rare for such a small mixer.

Use this to reduce hum or 'popping' from microphones on live vocals.

PAN

This control sets the amount of the channel signal feeding the **Right** and **Left MIX** outputs, allowing you to move the source smoothly across the stereo image. When the control is turned fully right or left you are able to place the signal to either left or right of the output.

AUX SEND 2

This is similar to the **Aux Send 1** control, but is always **POST-FADE**.

EQUALISER - LF EQ

Turn to the right to boost low (bass) frequencies, adding warmth to vocals or extra punch to synths, guitars and drums. Turn to the left to reduce hum, stage rumble or improve a mushy sound. Set the knob to the centre-detented position for a neutral EQ response.

FADER

The linear **FADER** gives you smooth control of the overall signal level in the channel strip, allowing precise balancing of the various source signals being mixed to the **Master Section**. It is important to set up the input **GAIN** correctly to give full travel (i.e. maximum control) on the fader. See the 'Initial Setting Up' section on page 10 for help in setting a suitable signal level.

PFL

When the latching **PFL (Pre-Fade-Listen)** switch is pressed the pre-fade channel signal is fed to the **monitor output** or **headphones**, replacing the normal source (either **Mix** or **Tape Return**).

You use this switch to listen to a channel signal without affecting the mixer outputs, to check the signal quality or simply to check that it is there! You would also use the **PFL** switch to set the input **GAIN**, and this is explained on page 10 'Initial Setting Up'.

SPiRIT FOLiO Si

MONO INPUT CHANNELS 13-14

STEREO INPUT L & R

Accept 3-pole 'A' gauge (TRS) jacks. Use these inputs for sources such as keyboards, drum machines, synths, tape machines or as returns from processing units. The inputs are **BALANCED** for low noise and immunity from interference, but you can use **UNBALANCED** sources by wiring up the jacks as shown later in this guide, although you should then keep cable lengths as short as possible.

HF EQ

Turn to the right to boost high (treble) frequencies, adding crispness to percussion from drum machines, synths and electronic instruments. Turn to the left to cut these frequencies, reducing hiss or excessive brilliance. Set the knob in the centre-detented position when not required.

AUX SEND 1

This can be used to set up a separate mono mix for **FOLDBACK** or to drive **EFFECTS PROCESSORS**, and the combination of all the Aux 1 Sends is mixed to the Aux 1 Output. For Effects it is useful for this to fade up and down with the **FADER** (this is called **POST-FADE**), but for Foldback or Monitor feeds it is important for the send to be independent of the **FADER** (this is called **PRE-FADE**).

The Master Section **AUX1 PRE** switch allows you to choose pre- or post-fade as required. Leave the knob turned fully to the left when not in use.

INPUT +4/-10

Most professional equipment uses input and output levels of +4dBu, but semi-professional tape machines use a low level of -10dBV (or hi-fi systems 100mV). This switch allows you to match the stereo input to either standard, to avoid overloading the input and to minimise noise. Release the switch for +4dBu, or press for -10dBV.

BALANCE

This control sets the amount of the channel signal feeding the Right and Left MIX outputs, allowing you to balance the source in the stereo image. When the control is turned fully right or left you feed only that side of the signal to the mix.

LFEQ

Turn to the right to boost low (bass) frequencies, adding extra punch to synths, guitars and drums. Turn to the left to reduce hum, boominess or improve a mushy sound. Set the knob to the centre-detented position when not required.

PFL

When the latching **PFL** (Pre-Fade-Listen) switch is pressed a mono sum of the pre-fade channel signal is fed to the monitor output or headphones, replacing the normal source (either Mix or Tape Return). You use this switch to listen to a channel signal without affecting the mixer outputs, to check the signal quality or simply to check that it is there!

AUX SEND 2

This is similar to the Aux Send 1 control, but is always **POST-FADE**.

FADER

The linear **FADER** gives you smooth control of the overall signal level in the channel strip, allowing precise balancing of the various source signals being mixed to the Master Section. It is important that the input level is set correctly to give maximum travel on the fader. See the 'Initial Setting Up' section on page 10 for help in setting the right level.

SPIRIT FOLIO *Si* STEREO INPUT CHANNELS 15-18

BARGRAPH METERS

The three colour, peak-reading BARGRAPH METERS normally show the level of the MIX RIGHT and MIX LEFT outputs, to give you a constant warning of excessive peaks in the signal which might cause overloading.

With the Master Faders at about '0', aim to keep the signal just touching the amber segments with a steady signal, or up to +6/+9 if there are heavy transients such as drum beats. If you cannot achieve a reasonable level, check the set-up of the inputs.

AUX 1 PRE

Press this switch to make all of the AUX 1 Sends on the channel strips PRE-FADE. This means that they will all be unaffected by the position of the channel faders, making them ideal for FOLDBACK or MONITORING. When the switch is released the AUX 1 Sends are all POST-FADE, and will fade up and down with the channel faders.

AUX 1 AFL

Just like the PFL switches on the channels, you can monitor the AUX 1 output by pressing the AFL switch. This routes the AUX 1 output signal to the MONITOR or PHONES, replacing any existing signal. The RIGHT METER also switches to display this signal and the PFL/AFL LED lights to warn that a PFL or AFL switch is pressed. When you release the switch the Monitor swaps back to the previous source.

AUX 2 AFL

This works just the same as AUX 1 AFL.

PHANTOM POWER

Many professional condenser mics need PHANTOM POWER, which is a method of sending a powering voltage down the same wires as the mic signal. Press the switch to enable the power to the MIC inputs on the Mono Channels.

DO NOT connect unbalanced mics to the mono inputs with the phantom power switched on. They may be damaged by the phantom power voltage on the XLR connectors.

TAPE RETURN TO MIX

Press this switch to route the TAPE RETURN signal direct to the mix outputs. Adjust the level with the TAPE RETURN LEVEL control.

TAPE RETURN LEVEL

The TAPE RETURN jacks are an ideal place to connect the playback of a tape machine, without using up any of the LINE inputs.

This pot sets the level of playback signal fed either to the MIX (when MIX is pressed) or MONITOR, when TAPE RETN is pressed.

TAPE RETURN TO MONITOR

Press this switch to route the TAPE RETURN signal to the MONITOR or PHONES outputs. Adjust the level with the TAPE RETURN LEVEL control.

MASTER FADERS

The MASTER FADERS set the final level of the MIX outputs, and separate faders are provided for LEFT and RIGHT. These should normally be set close to the '0' mark if the input GAIN settings have been correctly set.

MONITOR & PHONES LEVEL

This control sets the output level to the MONITOR LEFT & RIGHT outputs. If HEADPHONES are plugged into the PHINS jack the Monitor outputs are cut off, and the knob then sets the headphone listening level.

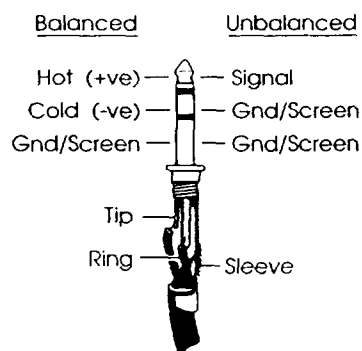
 **SPIRIT FOLIO** *Si*
THE MASTER SECTION

THE CONTROLS IN MORE DETAIL

STEREO INPUT CHANNELS 1-12

STEREO INPUT L & R

These inputs accept 3-pole 'A' gauge (TRS) jacks. Use these inputs for sources such as keyboards, drum machines, synths, tape machines or as returns from processing units. The inputs are UNBALANCED, to match the unbalanced signal sources which are most likely to be used with these inputs. Internal normalling on the inputs allows you to feed both channels in mono by connecting to the Left jack only.



SENSITIVITY

Most professional equipment uses input and output levels of +4dBu, but semi-professional tape machines or hi-fi systems use a lower level of -10dBV (or Hi-Fi systems 100mV). This control allows you to trim the input sensitivity across a range of 20dB to suit a wide variety of different input sources. Where the input level is more predictable, you may alternatively use channels 15-18, which have switched input sensitivity to suit +4dBu or -10dBV signals.

HF EQ

Turn to the right to boost high (treble) frequencies, adding crispness to cymbals, pianos and other electronic instruments. Turn to the left to cut these frequencies, reducing hiss or excessive brilliance. Set the knob in the centre-detented position for a neutral EQ response. The control has a shelving response giving 12dB of boost or cut at a fixed frequency of 12kHz.

MID EQ

This control provides 12dB boost (clockwise) or cut (anticlockwise) of Mid frequencies with a bell response centred at 1kHz, allowing some truly creative improvement of, for instance, many synthesised wind instruments or vocals which fall within this range. This control can have a dramatic effect on the sound, so listen carefully to find out how particular characteristics of a signal may be enhanced or reduced. Set the knob to the centre-detented position for a neutral response.

LFEQ

Turn to the right to boost low (bass) frequencies, adding warmth to organ or wind voices or extra punch to synths, guitars and drums. Turn to the left to reduce hum, boominess or improve a mushy sound. Set the knob to the centre-detented position for a neutral effect. The control has a shelving response giving 12dB of boost or cut at a fixed frequency of 60Hz.

AUX SEND 1

This is used to set up a separate mono mix for FOLDBACK, EFFECTS or recording, and the combination of all the Aux 1 Sends is mixed to the Aux 1 Output. For Effects it is useful for this to fade up and down with the FADER (this is called POST-FADE), but for Foldback or Monitor feeds it is important for the send to be independent of the FADER so that, for instance, the mix to artists headphones is not affected by changes in fader level (this is called PRE-FADE). The Master Section AUX1 PRE switch allows you to chose pre- or post-fade across the whole mixer as required. Leave the knob turned fully to the left when not in use.

AUX SEND 2

This is similar to the Aux Send 1 control, but is always POST-FADE.

BALANCE

This control sets the amount of the channel signal feeding the Right and Left MIX outputs, allowing you to balance the source in the stereo image. When the control is turned fully right or left you feed only that side of the signal to the mix. Unity gain is provided by the control in the centre-detented position.

PFL

When the latching PFL (Pre-Fade-Listen switch is pressed a mono sum of the pre-fade channel signal is fed to the monitor output or headphones, replacing the normal source (either Mix or Tape Return). You use this switch to listen to a channel signal without affecting the mixer outputs, to check the signal quality or simply to check that it is there!

FADER

The linear FADER gives you smooth control of the overall signal level in the channel strip, allowing precise balancing of the various source signals being mixed to the Master Section. It is important that the input level is set correctly with the +4/-10 switch to give maximum travel on the fader which should normally be used at around the '0' mark. See the 'Initial Setting Up' section on page 10 for help in setting the right level.

MONO INPUT CHANNELS 13-14

MIC INPUT

The mic input accepts XLR-type connectors and is designed to suit a wide range of BALANCED or UNBALANCED low-level signals, whether from delicate vocals requiring the best low-noise performance or close-miked drum kits needing maximum headroom. Professional dynamic, condenser or ribbon mics are best because these will be LOW IMPEDANCE. While you can use low-cost HIGH IMPEDANCE mics, you do not get the same degree of immunity to interference on the microphone cable and as a result the level of background noise may be higher. If you turn the PHANTOM POWER on (top right-hand side of the mixer) the socket provides a suitable powering voltage for professional condenser mics.

DO NOT use unbalanced sources with the phantom power switched on. The voltage on pins 2 & 3 of the XLR connector may cause serious damage.

Unplug any mics if you want to use the corresponding LINE Input to avoid the load presented by the mic from affecting the Line Input gain. The input level is set using the GAIN knob.

LINE INPUT

Accepts 3-pole 'A' gauge (TRS) jacks. Use this input for sources other than mics, such as keyboards, drum machines, synths, tape machines or guitars. The input is BALANCED for low noise and immunity from interference, but you can use UNBALANCED sources by wiring up the jacks as shown below, although you should then keep cable lengths as short as possible to minimise interference pick-up on the cable. Unplug anything in the MIC input if you want to use this socket. Set the input level using the GAIN knob.

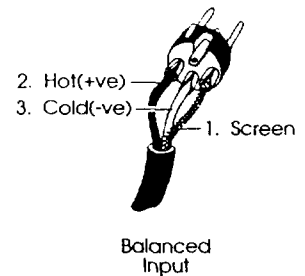
GAIN

This knob sets how much of the source signal is sent to the rest of the mixer. Too high, and the signal will distort as it overloads the channel and causes clipping. Too low, and the level of any background hiss will be more noticeable and you may not be able to get enough signal level to the output of the mixer. This is shown in the diagram on the right:

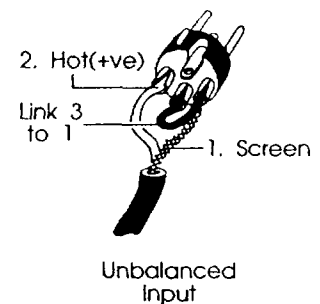
Setting the knob to the 'U' mark gives unity gain for the LINE input. Note that some sound equipment, particularly that intended for domestic use, operates at a lower level (-10dBV) than professional equipment and will therefore need a higher gain setting to give the same output level.

See 'Initial Setting Up' on page 10 to learn how to set the GAIN correctly.

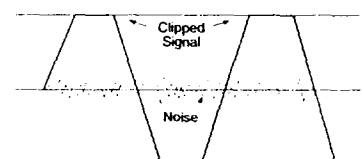
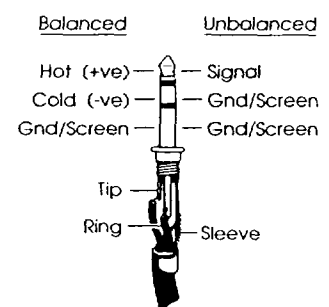
Balanced Mic Input - XLR



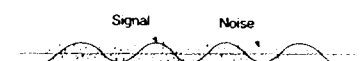
Unbalanced Mic Input - XLR



3-Pole Jack



If the signal level is too high, clipping distortion may occur.



If the signal level is too low it may be masked by the noise.

100HZ HI-PASS FILTER

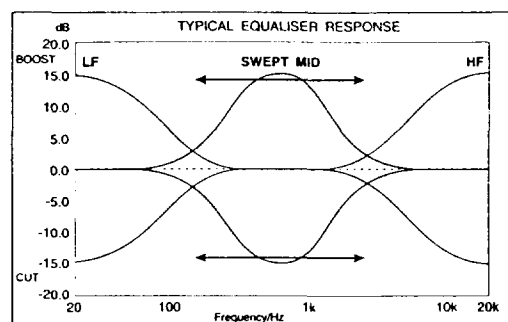
Pressing this switch reduces the level of bass frequencies only, and is a real bonus for a such a small mixer. Use this in live PA situations to reduce stage rumble or 'popping' from microphones.

EQUALISER

The Equaliser (EQ) allows precise manipulation of the sound, particularly to improve the sound in live PA applications where the original signal is often far from ideal due to poor acoustics or restrictions on where to place microphones and where slight boosting or cutting of particular voice frequencies can really make a difference to clarity. The EQ allows enough control to improve, for instance, bad recordings or the precision to gently enhance vocal or live instrument tracks. There are three sections, HF, MID and LF giving the sort of control usually only found on much larger mixers. The EQ knobs can have a dramatic effect, so use them sparingly and listen carefully as you change any settings so that you get to know how they affect the sound.

HF EQ

Turn to the right to boost high (treble) frequencies by up to 15dB at 12kHz, adding crispness to cymbals, vocals and electronic instruments. Turn to the left to cut these frequencies by up to 15dB, reducing hiss or over-emphasis of high-frequency consonants, which can occur with certain types of microphone. Set the knob in the centre-detented position when a flat response is required.



MID EQ

There are two knobs which work together to form a SWEPT MID EQ. The lower knob provides 15dB of boost and cut, just like the HF EQ knob, but the frequency at which this occurs can be set by the upper knob over a range of 250Hz to 6kHz. This allows some truly creative improvement of the signal in live situations, because this mid band covers the range of most vocals. Listen carefully as you use these controls together to find how particular characteristics of a vocal signal can be enhanced or reduced. Set the lower knob to the centre-detented position when not required.

LF EQ

Turn to the right to boost low (bass) frequencies by up to 15dB at 60Hz, adding warmth to vocals or extra punch to synths, guitars and drums. Turn to the left to cut low frequencies by up to 15dB for reducing hum, stage rumble or to improve a mushy sound. Set the knob to the centre-detented position when not required.

AUX SEND 1

This is used to set up a separate mix for FOLDBACK, EFFECTS or recording, and the combination of all the Aux 1 Sends is mixed to the Aux 1 Output at the rear of the mixer. The controls are specially chosen to give a particularly smooth control range at the lower end of the scale where it is most needed - quite unique on a mixer of this type. For Effects it is useful for the Aux Send to fade up and down with the fader (this is called POST-FADE), but for Foldback or Monitor feeds it is important for the send to be independent of the fader so that, for instance, the mix to artists headphones is not affected by changes in fader level (this is called PRE-FADE). The Master Section AUX1 PRE switch allows you to switch from pre- to post-fade across the whole mixer as required. Leave the knob turned fully to the left when not in use.

AUX SEND 2

This is similar to the Aux Send 1 control, but is always POST-FADE.

PAN

This control sets the amount of the channel signal feeding the Right and Left MIX outputs, allowing you to move the source smoothly across the stereo image. When the control is turned fully right or left you are able to place the signal at unity gain to either left or right of the output.

PFL

When the latching PFL (Pre-Fade-Listen switch is pressed a mono sum of the pre-fade channel signal is fed to the monitor output or headphones, replacing the normal source (either Mix or Tape Return). You use this switch to listen to a channel signal without affecting the mixer outputs, to check the signal quality or simply to check that it is there!

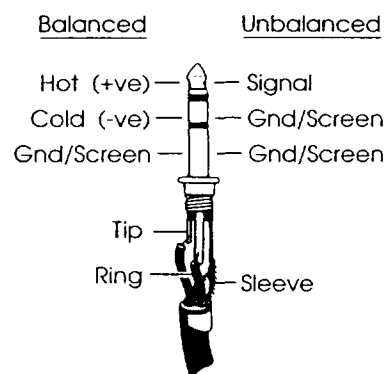
FADER

The linear FADER gives you smooth control of the overall signal level in the channel strip, allowing precise balancing of the various source signals being mixed to the Master Section. You get most control when the input GAIN is set up correctly, giving a normal fader position around the '0' mark, generous control range below and some gain in hand above the mark when you need that little bit extra. See the 'Initial Setting Up' section on page 10 for help in setting a suitable signal level.

STEREO INPUT CHANNELS 15-18

STEREO INPUT L & R

These inputs accept 3-pole 'A' gauge (TRS) jacks. Use these inputs for sources such as keyboards, drum machines, synths, tape machines or as returns from processing units. The inputs are **BALANCED** for low noise and immunity from interference, but you can use **UNBALANCED** sources by wiring up the jacks as shown, although you should then keep cable lengths as short as possible to minimise interference pick-up.



INPUT +4/-10

Most professional equipment uses input and output levels of +4dBu, but semi-professional tape machines or hi-fi systems use a lower level of -10dBV. This switch allows you to match the sources connected to the Stereo input jacks to either standard, which is important to ensure the best possible sound quality. If you are not sure what input level is appropriate, start with the switch UP to select +4dBu. If you are unable to achieve an adequate signal level (even with the fader at maximum), press the switch in for -10dBV. Alternatively you may use channels 1-12, which have variable input sensitivity.

HFEQ

Turn to the right to boost high (treble) frequencies, adding crispness to percussion from drum machines, synths and electronic instruments. Turn to the left to cut these frequencies, reducing hiss or excessive brilliance. Set the knob in the centre-detented position when not required. The control has a shelving response giving 15dB of boost or cut at a fixed frequency of 12kHz.

LFEQ

Turn to the right to boost low (bass) frequencies, adding extra punch to synths, guitars and drums. Turn to the left to reduce hum, boominess or improve a mushy sound. Set the knob to the centre-detented position when not required. The control has a shelving response giving 15dB of boost or cut at a fixed frequency of 60Hz.

AUX SEND 1

This is used to set up a separate mono mix for FOLDBACK, EFFECTS or recording, and the combination of all the Aux 1 Sends is mixed to the Aux 1 Output. For Effects it is useful for this to fade up and down with the FADER (this is called POST-FADE), but for Foldback or Monitor feeds it is important for the send to be independent of the FADER so that, for instance, the mix to artists headphones is not affected by changes in fader level (this is called PRE-FADE). The Master Section AUX1 PRE switch allows you to choose pre- or post-fade across the whole mixer as required. Leave the knob turned fully to the left when not in use.

AUX SEND 2

This is similar to the Aux Send 1 control, but is always POST-FADE.

BALANCE

This control sets the amount of the channel signal feeding the Right and Left MIX outputs, allowing you to balance the source in the stereo image. When the control is turned fully right or left you feed only that side of the signal to the mix. Unity gain is provided by the control in the centre-detented position.

PFL

When the latching PFL (Pre-Fade-Listen switch is pressed a mono sum of the pre-fade channel signal is fed to the monitor output or headphones, replacing the normal source (either Mix or Tape Return). You use this switch to listen to a channel signal without affecting the mixer outputs, to check the signal quality or simply to check that it is there!

FADER

The linear FADER gives you smooth control of the overall signal level in the channel strip, allowing precise balancing of the various source signals being mixed to the Master Section. It is important that the input level is set correctly with the +4/-10 switch to give maximum travel on the fader which should normally be used at around the '0' mark. See the 'Initial Setting Up' section on page 10 for help in setting the right level.

MASTER SECTION

AUX 1 PRE

The input channels provide both Pre- and Post-Fade AUX 1 sends which may be selected desk-wide on the Master Section. Press the AUX 1 PRE switch to make all of the AUX 1 Sends on the channel strips PRE-FADE. This means that they will all be unaffected by the position of the channel faders, making them ideal for FOLDBACK or MONITORING. Since this button affects all the channels on the mixer, its importance is highlighted by a different cap colour.

When the switch is released the AUX 1 Sends are all POST-FADE, and will fade up and down with the channel faders. This is more suitable for effects sends which need to fade out with the associated source.

AUX 1 AFL (AFTER FADE LISTEN)

Just like the PFL switches on the channels, you can monitor the AUX 1 output by pressing the AFL switch. This routes the AUX 1 output signal to the MONITOR or PHONES, replacing any existing signal (normally the Monitor receives either MIX or the Tape Return, depending on the position of the MIX switch - see below). The RIGHT METER also switches from the selected source to display the PFL/AFL signal and the PFL/AFL LED lights to warn that a PFL or AFL switch is pressed. When you let go of the switch the Monitor returns to the previous source.

AUX 2 AFL

This works just the same as AUX 1 AFL.

BARGRAPH METERS

The three colour BARGRAPH METERS have a PEAK response and normally follow the Monitor selection to show the level of the MIX RIGHT and MIX LEFT outputs, giving you a constant warning of excessive peaks in the signal which might cause overloading. The fast attack of the meters means that a signal with high level transients (e.g. kick drum) will tend to give a higher reading than a less dynamic signal (e.g. a synth) at the same level. You should therefore aim for an average reading of +6/+9 if the mix contains a high proportion of high level transients and a lower reading of around '0' for steadier signals with the Master Faders at about the '0' mark.

If the output level is too low and hardly registering at all on the meters, the level of background noise may become significant. In this case check that input levels and gain settings are correct (see the section -- Initial Setting Up)

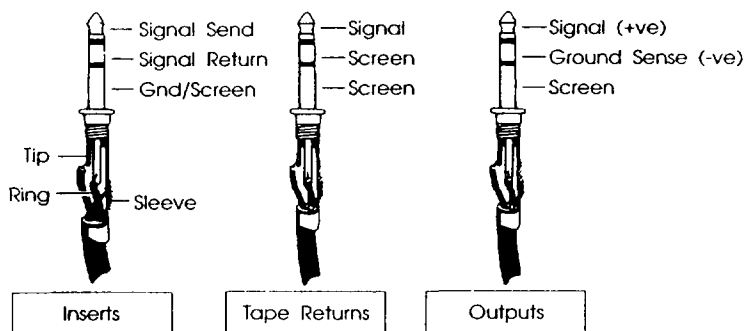
PHANTOM POWER

Many professional condenser mics need PHANTOM POWER, which is a method of sending a powering voltage down the same wires as the mic signal. Press the switch to enable the +48V power to the MIC inputs on channels 13-14. DO NOT turn on the phantom power when using unbalanced mics which may be damaged by the voltage applied to pin 2 & 3 of the mic input XLR.

Note: Mics should always be plugged in before switching the Phantom Power ON.

MASTER FADERS

The MASTER FADERS set the final level of the MIX outputs, and separate faders are provided for LEFT and RIGHT. These should normally be set close to the '0' mark if the input GAIN settings have been correctly set, to give maximum travel on the faders for smoothest control. If, even with correct input settings, you find that you are working with the master faders very low, then turn your power amplifiers down so that you can bring the fader level back to normal.



TAPE RETURN LEVEL

The TAPE RETURN jacks are an ideal place to connect the playback of a tape machine, without using up any of the LINE inputs. This pot sets the level of playback signal fed either to the MIX (when MIX is pressed) or MONITOR, when TAPE RETN is pressed.

The TAPE RETURN is also the best way of connecting a tape or CD player to feed pre-show music to a PA rig, since this leaves all input settings unaltered. It can also serve as the return from an Effects unit to save using up Line Inputs.

TAPE RETURN TO MIX

Press this switch to route the TAPE RETURN signal direct to the mix outputs. Adjust the input level with the TAPE RETURN LEVEL control. The Tape Return signal will now be present at the Mix outputs, at a level set by the Master Faders, and the meters will display this same signal.

TAPE RETURN TO MONITOR

Press this switch to route the TAPE RETURN signal to the MONITOR and PHONES outputs. Adjust the input level with the TAPE RETURN LEVEL control. The meters will now be directly reading the level of the Tape Return.

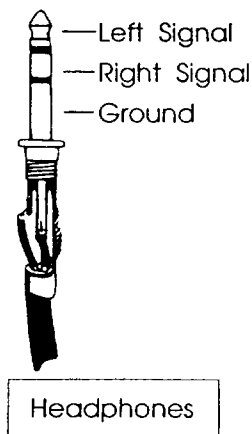
NOTE: If both TAPE RETN and TAPE RETURN TO MIX are pressed, although the mix outputs will be carrying the Tape Return signal under the control of the Master Faders, the meters will be displaying the full Tape Return signal.

MONITOR & PHONES LEVEL

This control sets the output level to the MONITOR LEFT & RIGHT outputs. If HEADPHONES are plugged into the PHNS jack the Monitor outputs are cut off, and the knob then sets the headphone listening level. When the PHONES are unplugged the Monitor output is restored.

MIX INSERTS

The Mix Left and Right signal paths have pre-fade insert points which provide a means of diverting the signal to an external processing unit such as a compressor or limiter. Inserting a jack into the insert breaks the signal path and allows the INSERT SEND (on the tip of the jack) to feed the input of the external unit and the INSERT RETURN (on the ring of the jack) to receive the corresponding output. Note that if the tip and ring of the jack are shorted together the signal path remains unbroken and the Insert may then be used as a way of tapping off the Mix signal before the fader.



NOTE:

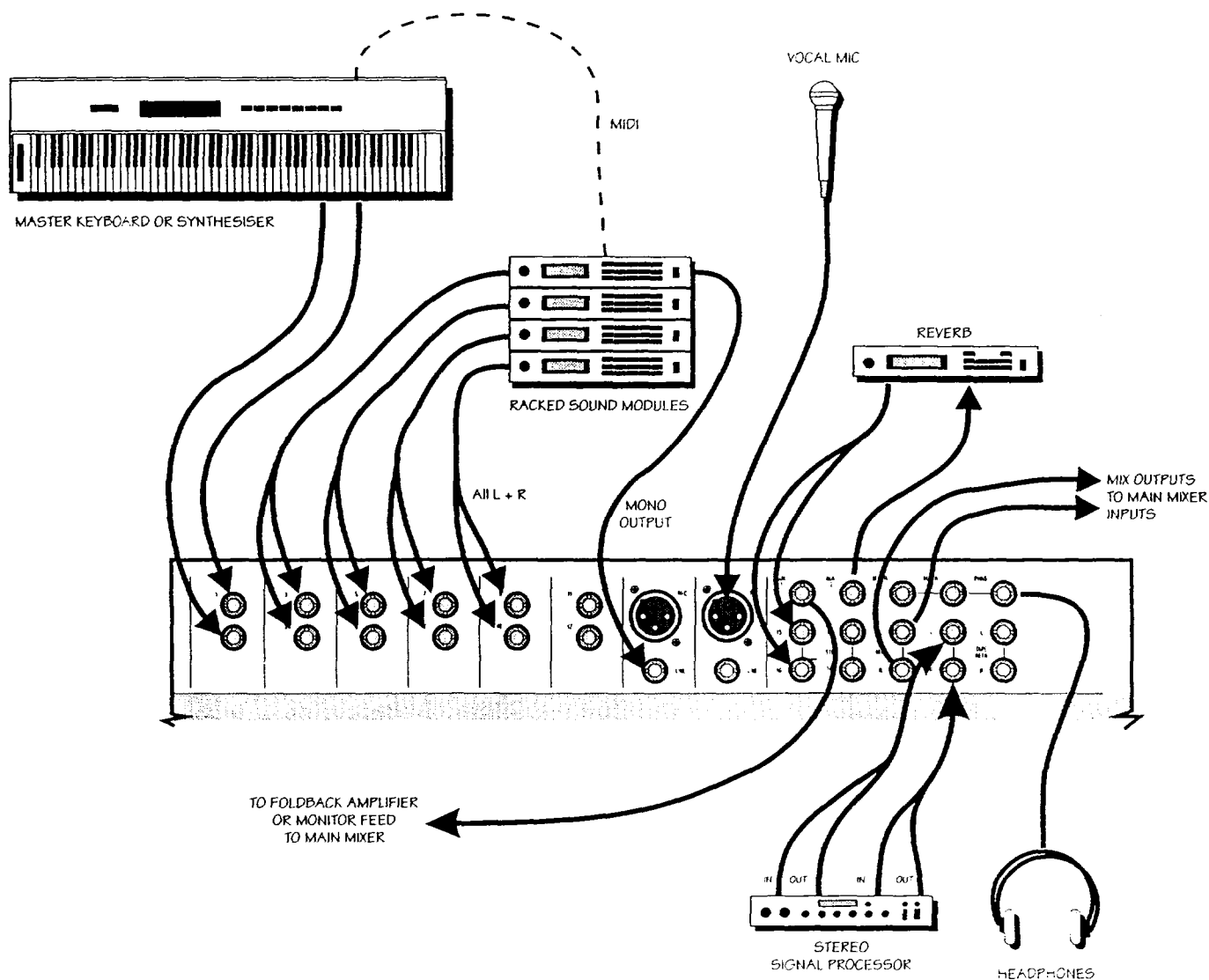
The internal power regulation circuits for the mixer are fitted in the top right-hand corner of the case. A small amount of heat is dissipated by these circuits and it is therefore quite normal for this corner of the mixer to become warm in normal operation.

APPLICATIONS

KEYBOARD MIXER/SUBMIXER

In this example, the console is used as a keyboard mixer, either stand-alone or as a submixer to another console. Stereo inputs 1-12 are used for a number of keyboard or sound module outputs. A mono output from a sampler is fed to the Line input on Mono channel 13. A microphone connects to the mic input on Mono channel 14, and an effects unit is fed from Aux 2 output and brought back to the console on stereo channels 15 & 16. The output is taken from Mix L & R to feed inputs on the main mixer, with stereo signal processing (e.g. Graphic Equaliser) available via the mix inserts if required.

Foldback mixes may be derived selectively from pre-fade Aux 1 as shown, or foldback of the complete submix may be taken from an Aux output on the main mixer.

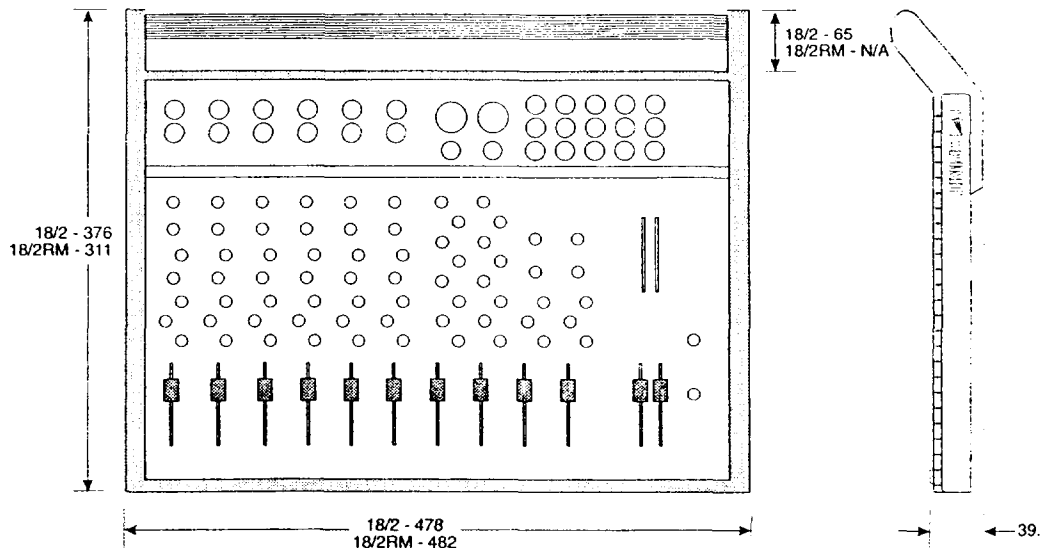


TECHNICAL SPECIFICATIONS

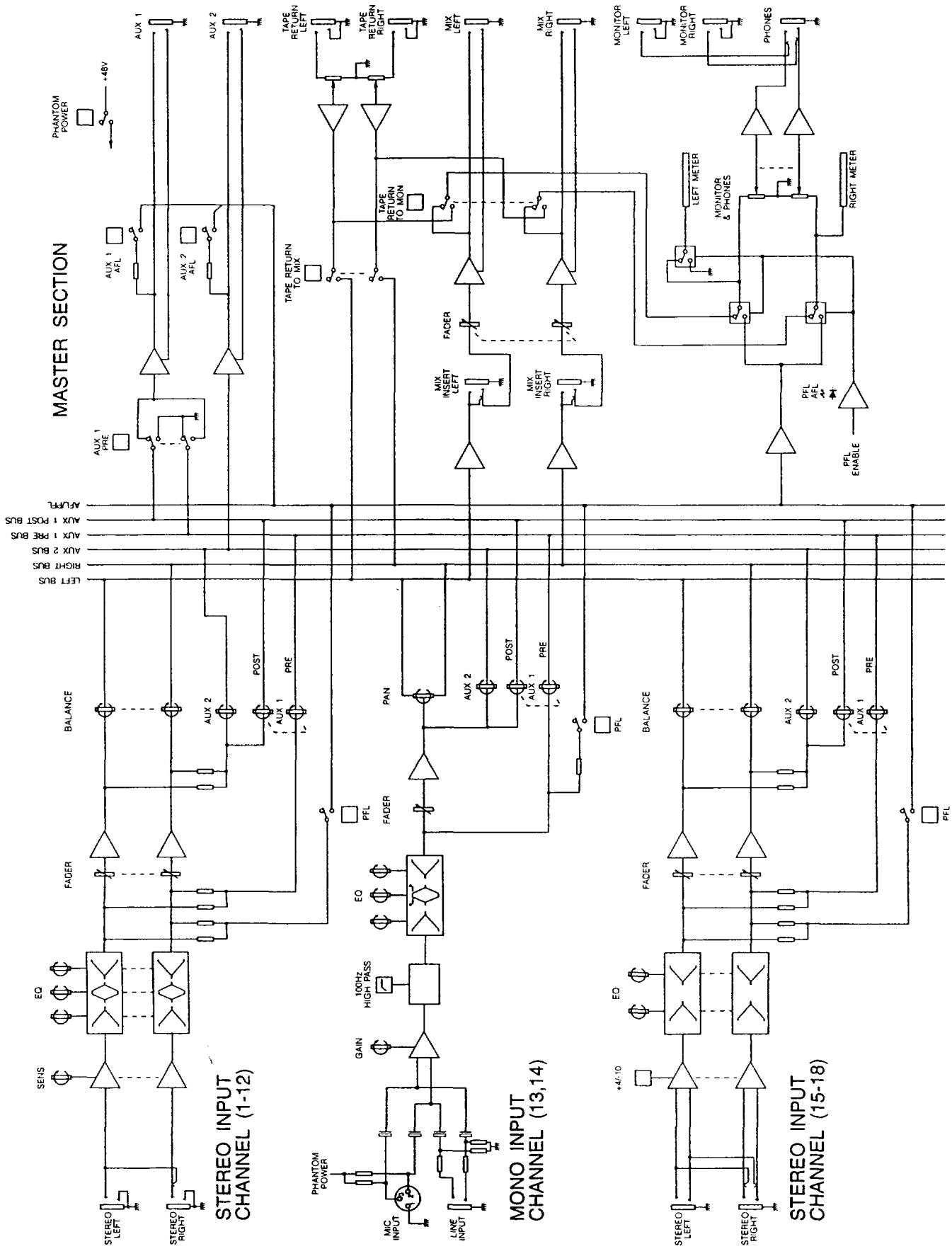
MIX NOISE	Input faders down, Master Faders up, all Pan and Balance controls centre.	< -80dBu		
E.I.N.	Source resistance 150Ω, gain maximum	-129dBu		
T.H.D.	Mic input, Gain 30dB, Mix Out at +20dBu Stereo input +20dBu, Mix Out at +20dBu	<0.005% 20Hz - 20kHz <0.002% @1kHz		
CROSSTALK	<i>1kHz sine wave</i>			
	Input Fader Attenuation	>100dB typical		
	Aux Send Attenuation	>85dB		
	Adjacent Channel	>90dB		
FREQUENCY RESPONSE	20Hz- 30kHz, relative to 1kHz	+/- 1dB		
INPUT & OUTPUT IMPEDANCES	Mic Inputs	2kΩ		
	Stereo Inputs 1-12	>100kΩ		
	Stereo Inputs 15-18	10kΩ		
	Outputs	75Ω		
INPUT & OUTPUT LEVELS	Mic Input	+11dBu maximum		
	Stereo Input 1-12	+21dBu maximum		
	Stereo Input 15-18	>+30dBu maximum		
	Any Output	+22dBu maximum		
	Headphone Output	200mW each side		
WEIGHT	Model	Console	Power Pack	Packing Box
	18/2	4.2Kg	0.6Kg	0.8Kg
	18/2 RM	5.2Kg	0.6Kg	0.8Kg

DIMENSIONS

All dimensions are in millimetres



SYSTEM BLOCK DIAGRAM



Soundcraft

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