ReMOTE LE

user guide
handbuch
manuel d'utilisation
manuale utente
guía del usario

Contents

Introduction

Thank you for purchasing the Novation ReMOTE LE controller keyboard. This device may be used to control sequencers, popular software virtual instrument applications (on a computer) or traditional hardware instruments via either a USB connection or a standard MIDI interface. The ReMOTE LE front panel provides nine knobs and nine buttons (with a Group B switch that doubles the controls for each template), along with an X/Y touchpad and pitch/mod joystick, all of which can be easily configured exactly the way you want and saved/instantly recalled using the onboard Template Memories.

Whether used live or in the studio to control virtual or hardware instruments, its comprehensive range of controls may be used to dynamically alter any sound parameters precisely and in real time.

Using this manual

This manual consists of six sections: Introduction, Quick Start Guide, MIDI Tutorial, Main Features and Operation, Advanced Settings and Troubleshooting. An Appendix is also provided containing reference data.

It is assumed that the reader already has a basic knowledge of MIDI in order to configure Templates. Those with limited MIDI experience may find the MIDI Tutorial useful. However, very little MIDI knowledge is required to use the ReMOTE LE with the factory preset Templates. It is simply a case of importing the relevant files from the resource CD (only required for software without a fixed MIDI spec) then selecting the Template that corresponds to the software/hardware being used (if one is available either onboard or on the website) and tweaking away.

In order to become familiar with the many useful features of the ReMOTE LE and get the most out of its MIDI controlling capabilities, it is recommended that this manual be read in its entirety. For anyone wanting simple and speedy instructions before delving deeper, the Quick Start Guide provides brief information on setting up the ReMOTE LE and a quick overview on selecting and using factory preset Templates.

Enjoy!

Main features

- Two-octave semi-weighted velocity-sensitive keyboard with combined pitch bend and modulation joystick. The keyboard is transposable up or down across the entire MIDI note range.

- MIDI or USB operation. USB and MIDI may be used simultaneously. A MIDI Out port and a sustain pedal socket are both available.

- Can be powered by the USB port, batteries or a 9V DC adaptor (not supplied).

- Generous selection of front panel controls including an X/Y touchpad, nine knobs and nine buttons (Group A and B; 18 knobs and 18 buttons in total), all of which can be individually configured.

- Comprehensive MIDI specification. Any front panel control may be configured to transmit on any MIDI channel to any destination. Available options include Controller numbers, NRPNs, RPNs, MMC commands, Note On/Off and Program Change messages.

- 16 onboard Template memories – 12 preset with more available on the Novation website. Each Template contains definitions for all front panel controls. Templates may be individually named for easy reference.

- Template memories may be saved as System Exclusive bulk dumps to an external sequencer, MIDI data filer or the Template Editor.

Conventions used in this manual

The word 'Template' refers to a collection of knob and button settings (all assigned with specific MIDI data) and the function of the pedal and X/Y touchpad. Each Template is individually named and numbered from 1 to 16 and can be saved in the ReMOTE LE's onboard memory.

The word 'preset' refers to a Template configured at the factory to showcase some of the ReMOTE LE's powerful control possibilities. Preset Templates may be overwritten by new settings.

The word 'control' refers to any of the front panel knobs, assignable buttons, user's sustain pedal (not supplied), joystick or the X/Y touchpad. Within a single Template, each control may be individually configured to transmit various types of MIDI information to the USB port and/or MIDI Out.

Text in CAPITALS refers to a front panel control or legend (even though the name of the control may actually be in lower case on the front panel). It could be a knob, button or rotary encoder.
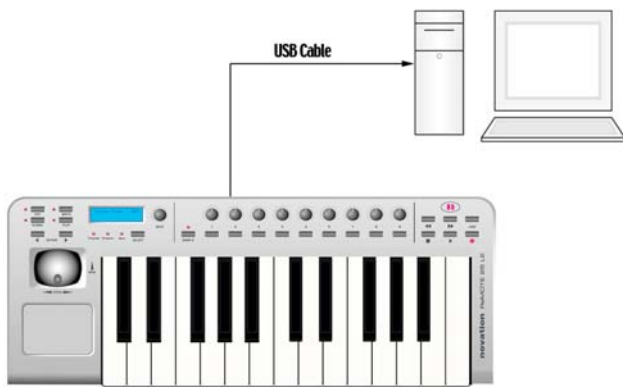
Connecting the ReMOTE LE

The ReMOTE LE may be connected to a system in three different ways:

1. Connection to a computer using the USB port.
2. Connection to MIDI equipment using the MIDI Out port.
3. Connection to MIDI equipment using the MIDI Out port AND to a computer using the USB port.

Connecting to a computer using the USB Port

The illustration below shows a typical arrangement:

NB: The computer must be running Mac OS X or Windows XP.

Connect the ReMOTE LE to the computer using the supplied USB cable. Connect a sustain pedal (not supplied) if required. Since power is being supplied from the computer via the USB cable, it is not necessary to have batteries or an external PSU fitted.

Driver Installation

Before the ReMOTE LE can be used to control sequencers and software synthesizers, the ReMOTE LE MIDI drivers must be installed on the computer.

Windows XP Installation

Insert the Novation driver CD into the CD-ROM drive of the computer. Connect the ReMOTE LE to the computer (if this has not already been done) using the supplied USB cable. A small pop-up box will appear at first followed by a large dialogue box titled 'Found New Hardware Wizard'. If using SP2, the first screen will ask, 'Can Windows connect to Windows Update to search for software?'. Click, 'No, not this time' followed by the 'Next' button. The remainder of the process is identical to the process for SP1 users, now asking what you want the wizard to do. Select 'Install from a list or specific location (advanced)' then click 'Next'. The next screen asks to choose your search and installation

options, click 'Don't search, I will choose the driver to install' then click 'Next'. The next screen allows you to select the driver from a list, ignore the list and click 'Have disk'. A separate install from disk float window will now open, click the 'Browse' button to search for the driver file on the Novation CD yourself. Browse to the CD and select the ReMOTE LE driver folder and open the file inside by clicking 'Open' once the file is selected. Now click 'OK' in the install from disk window. The process then returns back to the driver select window. The next screen will inform that the USB logo has not been tested by Microsoft, click 'Continue Anyway'. Do not be alarmed by the message since the driver has been tested. Windows will now confirm that the installation is complete. Click the 'Finish' button. Then reboot the computer.

Mac OSX Installation

Insert the Novation driver CD into the CD-ROM drive of the computer. Drag the driver install file (ending .pkg) onto the desktop. Double click the icon once on your desktop and the installation will be carried out. You can delete the .pkg file once the drivers have been installed.

Now, all that is required is to open up the recording software/sequencer you wish to control and then ensure that the ReMOTE LE is selected within the MIDI preferences of that software application. Consult the documentation supplied with the software package if unsure of how to set up a MIDI controller for it.

Playing and controlling software synthesizers from the ReMOTE LE

Numerous software synthesizers may be controlled using the ReMOTE LE. To make this straightforward, Templates (memories that contain the specific control information for individual synthesizers assigned to the ReMOTE LE's controls) have already been constructed for most popular software/hardware. The ReMOTE LE has 12 preset Templates onboard and additional Templates available at www.novationmusic.com. See page 22 for a list of preset Templates.

To select a Template for a particular software synthesizer, make sure that the ReMOTE LE is in PLAY - Template Select Mode (PLAY LED and Template LED both lit). This mode will be active when the unit is powered up but if another mode is active then press the PLAY button (Menu not Transport) on the left of the unit so that the LED beside it is lit and then press the SELECT button below the ReMOTE LE screen (repeatedly if necessary) until the Template LED is lit. Now the DATA encoder can be used to scroll to the desired Template. If some or all of the controls on the ReMOTE LE don't seem to work when the correct Template is selected then the software synthesizer may not have a defined MIDI spec. In this case the relevant file will need to be imported from the resource CD (see 'controlling a sequencer' section for details).

If a template for the software synthesizer is not available then one can easily be constructed either on the hardware (see EDIT Mode section on page 11 for details) or using the Template Editor (available for download from novationmusic.com). Even without a template, the ReMOTE LE keyboard and pitch/mod joystick can be used to play sounds and the Program and Bank modes within PLAY mode can be used to call up a different sound on the software synth (see page 10 for details).

Controlling a sequencer

Even though the ReMOTE LE contains a Template for a sequencer such as Cubase, simply calling up the Template using the DATA encoder will not mean that all controls are automatically mapped to the sequencer (e.g. the Transport controls will not work). This is because, when software does not have a defined MIDI spec, the MIDI data assigned to the controls on the ReMOTE LE needs to be learned by the software, which may be simple or complex depending on the software. To overcome this and make it a simple process, Novation provide a learn/resource file on an accompanying CD-ROM to import into the relevant software. Read the text file in the relevant software folder on the CD-ROM for instructions on how to do this. This may also apply to some software synthesizers, for example the Pro-53.

FOR MORE INFO ON THE ONBOARD TEMPLATES VISIT NOVATIONMUSIC.COM

## Power supply or battery operation

The ReMOTE LE may be powered by an external power supply (Novation PSU6, not supplied) or by 6 x 'AA' batteries.

Fitting batteries
Turn the ReMOTE LE upside down and unclip the battery compartment by squeezing the two clips and gently raising the lid. Observe the connection diagram imprinted on the plastic casing for 6 x 'AA' cells and fit the cells as shown.

Connecting to equipment using the MIDI Out port

This is referred to as the 'stand alone' or 'live' set-up. The illustration below shows a typical arrangement:
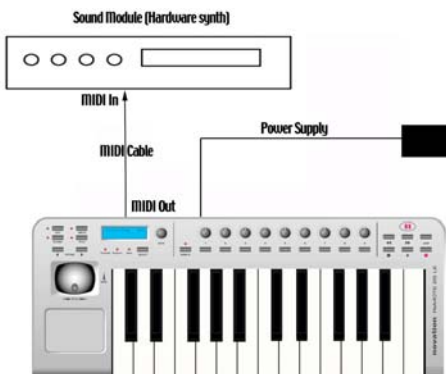
Ensure power is off on all equipment. Connect the MIDI Out of the ReMOTE LE to the MIDI In of a suitable sound module. If batteries are not fitted then an external power supply (Novation PSU6) must be connected - see previous section for information. Connect any other equipment such as a sustain pedal to the ReMOTE LE. Switch on the power to all devices.

Playing a sound module or hardware synthesizer from the ReMOTE LE
Set the receiving MIDI channel of the sound module to Channel 1 or OMNI (this should be the default). The keyboard and pitch/modulation joystick will be active and the sound module will respond to the MIDI information being sent from the ReMOTE LE.

To select a Template for a particular hardware synthesizer, make sure that the ReMOTE LE is in PLAY - Template Select Mode (PLAY LED and Template LED both lit). This mode will be active when the unit is powered up but if another mode is active then press the PLAY button (Menu not Transport) on the left of the unit so that the LED beside it is lit and then press the SELECT button below the ReMOTE LE screen (repeatedly if necessary) until the Template LED is lit. Now the DATA encoder can be used to scroll to Template No. 10 'General MIDI 2' or the corresponding Template for that sound module (if one is available, check the website for hardware Templates). With the Template selected, the ReMOTE LE's knobs and buttons will map to relevant controls on the sound module. If a Template for the hardware synthesizer is not available then one can easily be constructed either on the hardware (see EDIT Mode section on page 11 for details) or using the Template Editor (available for download from novationmusic.com). Even without a template, the ReMOTE LE keyboard and pitch/mod joystick can be used to play sounds and the Program and Bank modes within PLAY mode can be used to call up a different sound on the hardware synth (see page 10 for details).

Connecting to equipment using the MIDI Out port AND connecting to a computer using the USB port

This is an advanced setup where the ReMOTE LE is connected to an external sound module/hardware synthesizer using the MIDI Out port as well as being connected to a computer via USB:
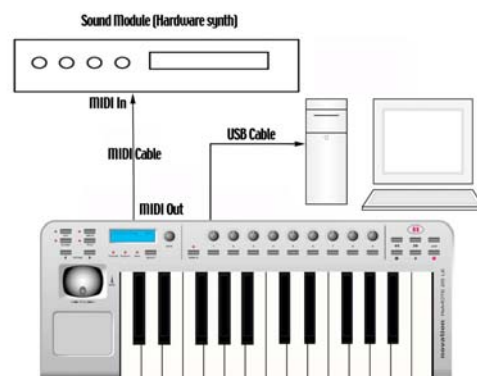
NB: The computer must be running Mac OS X or Windows XP

This setup provides a flexible system. The MIDI port is used to control the hardware synth, which gives 16 channels of available MIDI. The MIDI data sent from the computer via the USB port can control the sound module as well as events (such as slider or knob movements and key presses) from the ReMOTE LE. The ReMOTE LE can also simultaneously control the sequencer and any software synths or samplers running within the computer. See earlier sections for how to load up Templates to control software/hardware.

What is a Template?

A Template is the name given to a collection of knob and button settings (all assigned MIDI data of some kind), in addition to the settings of the joystick and Touchpad. The way that the controls (knobs, buttons...etc.) have been set up is dependent on what the Template is for. For example, a Template for controlling Novation's V-Station software synthesizer has all the ReMOTE LE controls mapped to appropriate locations within the V-Station software so that rotating/pushing a dial/button on the ReMOTE LE changes various parameters on the V-Station. If this is still confusing, here is a more specific example of what Templates are for:

If you were using the Novation V-Station and you wanted to control the V-Station parameters using the knobs and buttons on the ReMOTE LE, you could get the V-Station manual and look in the back to see what MIDI messages control which V-Station parameters and then program each control on the ReMOTE LE to control a different V-Station parameter by making it send the corresponding MIDI message. Then, if you were using the V-Station in Cubase and you wanted to use the ReMOTE LE to control the

Cubase mixer, you would have to reprogram all of the controls on the ReMOTE LE so that they send MIDI messages which Cubase can understand. Every time you wanted to switch between controlling Cubase and the V-Station, you would have to reprogram all the knobs and buttons. Templates mean that you don't have to continually reprogram the ReMOTE LE controls because you can save all the settings onboard the unit and then instantly recall them by selecting the saved Template. A preset Template is a Template that has already been constructed by Novation so that you don't need to construct one yourself, all you have to do is select the preset Templates for V-Station and Cubase to easily switch between controlling them both!

There are 12 preset Templates onboard the ReMOTE LE (for various sequencers and software synthesizers) meaning that the ReMOTE LE can be used to control many different applications as soon as it has been purchased without having to perform complex setup procedures. Simply rotating the DATA encoder below the LCD screen once the ReMOTE LE has first been powered up will scroll through the onboard Templates. You will notice that there are actually 16 Template memories, this is because there are 4 spare slots for building your own Templates. In addition to these, you will find many more Templates available for free at the Novation website www.novationmusic.com. To find out how to construct your own Templates or edit the preset Templates onboard the ReMOTE LE, simply consult the relevant sections of the manual. If confused as to why a Template for a particular sequencer (or some VST Instruments) does not appear to be working then read the 'Controlling a Sequencer' section earlier in the Getting Started Guide, which explains why.

MIDI Tutorial

Introduction

MIDI is an acronym for Musical Instrument Digital Interface. The MIDI standard was devised in the early 80's as a means for allowing digital musical instruments to communicate with each other as well as with other devices such as sequencers and computers. Before the advent of MIDI, it was often very difficult (if not impossible) for instruments to effectively communicate with each other, especially if they had been made by different manufacturers. Nowadays, virtually all digital instruments are equipped with a MIDI interface as standard, including synthesizers, drum machines, samplers, sequencers, computers and even some effects units and mixers.

The MIDI standard allows many different instruments to be controlled at once (say from a sequencer or a controller keyboard such as the ReMOTE LE) using the same network of MIDI cables. Each instrument in the MIDI chain is usually assigned its own unique MIDI channel and will only respond to information that it may receive on that particular channel. The MIDI standard allows for sixteen different

channels to be assigned to the various instruments in a MIDI network. This means that it is possible to have up to sixteen instruments playing simultaneously within a MIDI system. Some people may feel that being restricted to just sixteen MIDI channels might be a little limiting, especially if they are composing very complex pieces of music. However, some sequencers, MIDI ports for computers and master keyboards offer a neat way around this problem. They can offer several different MIDI outputs, each of which is treated as a separate MIDI system in its own right with its own set of sixteen MIDI channels. The ReMOTE LE may use its MIDI OUT to gain access to 16 MIDI channels with the USB port commanding the same 16 within the computer.

MIDI ports

The ReMOTE LE has one standard MIDI port (MIDI Out), which transmits MIDI data to external MIDI instruments. For example, if a note was played on the ReMOTE LE's keyboard or one of the controls were moved on the front panel, this data could be used to control the MIDI

Instrument. Similarly, the MIDI Out port will transmit any MIDI data received at the USB port from the sequencer. The USB port acts in a manner similar to a combined MIDI In/MIDI Out. It can be regarded as a special port that can send and receive MIDI information simultaneously. It is a convenient way of connecting to a computer without having to connect two sets of standard MIDI cables (it is not possible to send MIDI data in two directions using one standard MIDI cable). The information that flows through the USB connection does however conform to the same message format as standard MIDI.

MIDI messages

The ReMote LE is capable of transmitting various types of MIDI events. These are as follows:

Note messages

A note message is transmitted every time a key on the ReMOTE LE's keyboard is pressed down or released. When a keyboard note is pressed down, the MIDI message also includes velocity information. This represents how hard the key was pressed down and translates to the volume of the sound produced by the MIDI instrument. This velocity value can therefore be used to add dynamics to the sound. It is also possible to configure buttons on the front panel to transmit note messages, such as a Note On message when the button is pressed and a Note Off message when the button is released. This is detailed on page 14.

Continuous Controller messages

These messages are commonly used to alter synthesizer parameters by MIDI. In many of the Templates, it is Continuous Controller messages that are sent when the front panel controls are moved. The MIDI specification allows for 128 different types of controller message. These are often referred to as Continuous Controllers, or CC numbers, and run from 0 to 127 inclusively. Some CC numbers have specific functions rigidly defined by the MIDI standard. For example, CC No1 is always used for the modulation wheel. Therefore, whenever you move the ReMOTE LE's pitch/modulation joystick upwards, it will transmit MIDI Continuous Controller information using CC1. All makes of synthesizers will also use CC1 for modulation wheel data.

Many CC numbers have no set purpose within the MIDI specification. For example, whenever a Novation K-Station's Filter FREQUENCY knob is moved, it will transmit using CC105. There is no guarantee, however, that other makes of synthesizer will use this CC number for the same purpose.

A CC MIDI message contains a fixed data value anywhere in the range 0 to 127 (the CC number) along with a variable amount (e.g. the position of the knob). Use of CC messages is detailed on pages 11 to 13.

Non-Registered Parameter messages

Some synthesizers (such as the Novation K-Station) actually have many more than 128 different parameters that can be transmitted by MIDI, but because the number of different types of Continuous Controller message is limited to just 128, a more complicated arrangement for transmitting additional parameters is used. This arrangement is known as Non-Registered Parameter Numbers (NRPNs for short). NRPNs actually consist of three MIDI Continuous Controller messages grouped together, rather than a single MIDI Continuous Controller message which is normally used. The first two CC messages define the NRPN number of the message. CC98 is used to specify the least significant byte (LSB) of the NRPN number and CC99 is used to specify the most significant byte (MSB) of the NRPN number.

Registered Parameter messages

These are known as RPNs and are similar in format to NRPN messages. CC100 is used to define the RPN LSB and CC101, the RPN MSB (usually zero). As for NRPNs, CC6 contains the actual data value. RPN numbers assigned by the MIDI specification are:

0 Pitch Bend sensitivity
1 Fine Tuning
2 Coarse Tuning
3 Tuning Program Select
4 Tuning Bank Select

Many synthesizers do not use RPNs. Consult your synthesizer manual for details of which RPNs are recognised. The use of RPNs is detailed on page 13.

Pitch bend messages

These messages are transmitted whenever the ReMOTE LE's joystick is moved along the X-axis (from left to right). It is also possible to assign the X/Y touchpad to transmit pitch bend. As the name implies, pitch bend messages are used to move sounding notes up or down in pitch.

Program Change & Bank Select messages

These messages are used to remotely select sounds on a software/hardware synthesizer. The MIDI specification only allows a MIDI Program Change message to select one of 128 different sounds. When the MIDI specification was originally designed, this was rarely a problem since synthesizers seldom had more than 128 memories. Modern synthesizers such as the Novation K-Station offer many more memories than this (the K-Station for example, actually has 400 memories divided into four 'Banks' of 100 memories each), so it is often convenient to send a MIDI Program Change preceded by an additional MIDI message which specifies which 'Bank' of sounds the following Program Change message will select from.

The Bank Select MIDI message used for this purpose is actually a MIDI Continuous Controller message. CC32 is the Continuous Controller number used by Novation and most manufacturers, but a few manufacturers may use CC0 instead. Consult the synthesizer manual for details on the Bank Select CC number used. For example to select Program A100 on the Novation Supernova, the following MIDI messages would be needed:

CC32: 5 (5 selects Program Bank A on the Novation Supernova)
Prog Change: 100

Synthesizers that implement Bank Select usually require that the appropriate Bank Select message be sent before a following Program Change message. Synthesizers not implementing Bank Select need only receive a Program Change message.

Warning: many synthesizers will only accept a Program Change message if a Bank Select message has been received first!

Bank Select Messages may be sent from the ReMOTE LE by either using the DATA encoder from within PLAY Mode with the Bank LED active (CC32 is always sent) or by defining a control within a Template to transmit CC0 or CC32 as appropriate. Program Change messages may be sent from the ReMOTE LE by either using the DATA encoder from within PLAY Mode with the Program LED active or by defining a control within a Template to transmit Program Change. See page 15 for more information on using the ReMOTE PLAY modes to send Program Change and Bank Select messages.

Channel messages
All of the different types of MIDI messages outlined so far include information detailing which MIDI channel was used when the message was transmitted. MIDI channel messages will only affect receiving devices using the same MIDI channel. For example, a Pitch Bend message sent using MIDI channel 1 would have no effect at all if it were received on a synthesizer set to respond on MIDI channel 2. Some MIDI messages do not include any MIDI channel information defined in them. Some examples of these are:

System Exclusive messages
This is special type of MIDI message, often referred to as 'sysex'. System Exclusive messages can contain any type of data, depending what the synthesizer manufacturer decides to put in it! The only constraint with system exclusive messages is that they always contain certain header information that is exclusively used by the manufacturer (and usually the relevant synth model as well). What this effectively means is that a MIDI device will only accept a system exclusive message designed especially for it. For example, if the Novation K-Station should receive a system exclusive message transmitted by a different make of synthesizer, the message would simply be ignored. Similarly,

other makes of synthesizer will ignore any system exclusive messages originally sent by a Novation K-Station.

Unlike other types of MIDI message, System Exclusive messages do not have a fixed length. The MIDI specification allows any number of data bytes (each with a value between 0 to 127) between a Sysex Start byte and a Sysex End byte. The first data bytes in a sysex message always contain the manufacturer ID. This is unique to each synthesizer manufacturer.

The ReMOTE LE employs system exclusive messages for two distinct purposes. Firstly, they can be used to back up all of the ReMOTE LE's Template memories to the Template Editor. This feature is extremely useful in building up a Template library on a computer or for making a safety copy of data in case the worst should happen. Data backup is discussed in detail on page 20 in the Advanced Settings chapter.

Secondly, Novation also use system exclusive messages to enable a ReMOTE LE to update its entire operating system via MIDI. The latest operating system for the ReMOTE LE is always available free of charge at the Novation web site novationmusic.com.

MIDI Machine Control (MMC) messages
These are a range of messages designed to communicate with sequencers and recording devices. In reality, MMC commands are actually specialised forms of System Exclusive messages (termed 'Universal'), which are designed to be recognised by any manufacturer supporting MMC. When MMC commands are assigned to ReMOTE LE controls, only the MMC command need be specified.

The remainder of the MMC Universal System Exclusive message is automatically constructed by the ReMOTE LE. See page 14 for details on assigning MMC.

A MIDI Implementation Chart provides a concise way of telling at a glance which MIDI messages an instrument will transmit and respond to. A MIDI Implementation Chart for the ReMOTE LE can be found on page 23.

Main Features and Operation

Front panel layout
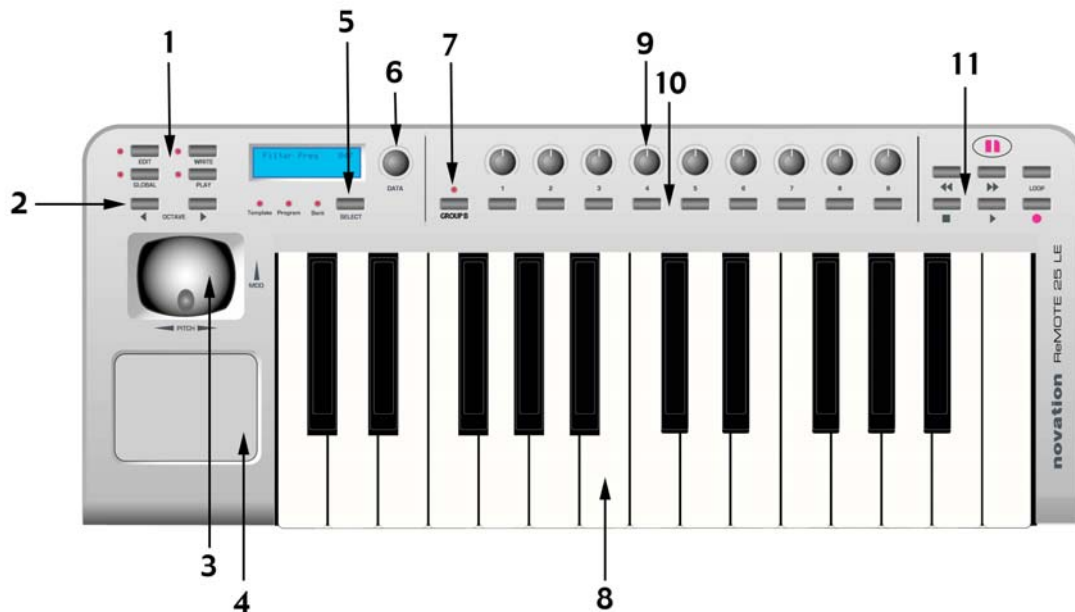
1. Mode Select buttons
Contains the buttons used to select the various modes of operation and the WRITE button, which is used to save settings.

2. Keyboard Octave buttons
Can transpose the keyboard up and down across the entire MIDI note range. Also used to step through menu options in GLOBAL or EDIT mode.

3. Combined modulation/pitch bend joystick

4. Programmable X/Y touchpad

5. PLAY Mode SELECT button
Steps through Template Select, MIDI Bank Select and Program Change modes (when in PLAY Mode).

6. DATA encoder

7. GROUP B button
Alternates between two Groups of Template controls; meaning a total of 18 knobs and 18 buttons are available for each Template.

8. 2-octave keyboard

9. Nine programmable knobs

10. Nine programmable buttons

11. Transport controls
Controls an external sequencer in a similar manner to domestic tape deck transport controls.

Rear panel connections

1. USB port

2. 9V DC adaptor socket
PSU not supplied

3. Power switch
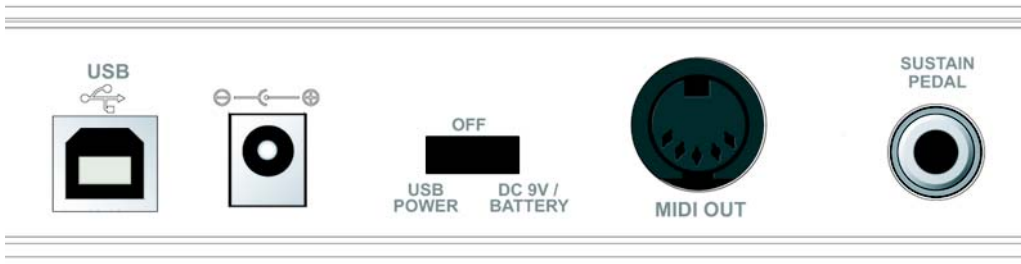Set to USB Power, Off (centre) or PSU/Batteries

4. MIDI Out port

5. Sustain pedal ¼" jack input

Modes and menus

The ReMOTE LE has three main modes of operation, selected by pressing the corresponding button: PLAY, EDIT and GLOBAL. The LED to the left of the button indicates which mode is active. The WRITE button does not activate a mode, but is used to save settings within EDIT and GLOBAL modes.

PLAY mode
Press the PLAY button to the left of the screen to access this mode (the LED to the left of the button must be active). PLAY mode is used for normal performance, meaning controlling software or hardware using the keyboard and MIDI controls. There are three different modes within PLAY mode, chosen by the SELECT button below the screen and indicated by the three LEDs to the left of it:
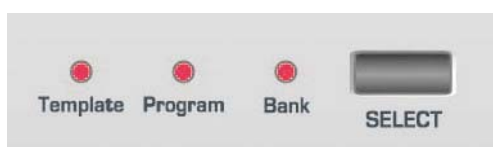
The three modes are Template, Bank and Program. See page 10 to read more about detailed PLAY mode operation.

Template mode
This mode allows the selection and operating of the ReMOTE LE's onboard Templates. Within this mode, the currently loaded Template name will be displayed on the screen until a knob/button is moved, upon which the control values set for that knob/button will appear temporarily. PLAY mode will load as default when the ReMOTE LE is powered up. Use the DATA encoder to scroll between the 16 onboard Templates.

Program mode
This mode allows the ReMOTE LE to change the MIDI program number of a software or hardware synthesizer using the DATA encoder (e.g. load a different sound). Just press the SELECT button on the ReMOTE LE whilst in PLAY mode until the Program LED is lit and then use the DATA encoder to scroll through the attached synth's sounds.

Bank mode
This mode allows the ReMOTE LE to change the MIDI bank on a software or hardware synthesizer using the DATA encoder (e.g. load up a different bank of sounds). Just press the SELECT button on the ReMOTE LE whilst in PLAY mode until the Bank LED is lit and then use the DATA encoder to scroll through the attached synth's sound banks.

EDIT mode
Pressing the EDIT button (once or twice) accesses the two EDIT modes respectively (the LED to the left of the button will be lit continuously or flashing depending on which EDIT mode is active). The EDIT modes are used to change or define the individual parameters assigned to a particular knob/button within the currently selected template, such as filter cut-off information for Knob 1, or the common parameters for the whole template, such as the velocity curve used by the keyboard mechanism. See page 11 for more information on how to use EDIT mode.

GLOBAL mode
GLOBAL mode is used to edit the various settings that apply to the ReMOTE LE across all Templates. Press the GLOBAL button to select this mode (the LED to the left of the button must be active). See page 20 for more information on how to make GLOBAL changes.

Using menus – PLAY mode

All operational modes except PLAY mode allow various settings to be altered from within menus. PLAY mode allows the ReMOTE LE to control software or hardware using either the onboard Templates (in Template mode), or simply use the DATA encoder to change the MIDI Program or Bank (in Program or Bank mode).

Template mode

When PLAY Mode is initially accessed, the ReMOTE LE is in TEMPLATE SELECT mode as indicated by the Template LED below the LCD screen. The display shows the Template's name and location in this mode, for example:

```
        Nov-V-Station
                   08
```

When a knob/button is rotated/pressed, the changing value of MIDI data assigned to it is displayed temporarily. For example, if Filter Frequency is assigned to Knob 1 on Continuous Controller number 105 and that knob is rotated then the following will be briefly shown:

```
     Filter Frequency
          065    CC105
```

(065 will not be a fixed value but will change as the knob is rotated.) Once the value has been set and the knob/button has been released, the currently selected Template reappears after an amount of time set within the GLOBAL menu (defaults to 1/2 second). See page 20 for more information on how to edit the GLOBAL Menu.

To view the MIDI data assigned to a particular knob or button without modifying it, simply hold down the PLAY button to the left of the LCD screen (not the Transport control) whilst turning that control. The parameter assigned to that control is not modified whilst the PLAY button is held down, only viewed. Alternatively, to see all the Template controls simultaneously and edit them quickly and easily on your computer, use the separate Template Editor application, which can be downloaded free of charge from novationmusic.com.

GROUP B Button

Although there are only nine knobs and nine buttons visible on the ReMOTE LE, there are in actual fact double that amount available for edit; two Groups (A and B) mean that there are a total of 18 knobs and 18 buttons accessible. The ReMOTE LE will default to Group A, as indicated by the GROUP B LED not being lit. Simply press the GROUP B button to activate the second group of knobs/buttons (the LED above it will light to show that Group B is activated), all nine knobs and all nine buttons can now be assigned completely different parameters within the Template.

Display of X/Y touchpad controls

In PLAY mode, when the touchpad is pressed the display will show:

```
   X1 = XXX  Y1 = XXX
   X2 = XXX  Y2 = XXX
```

XXX is the actual value being sent. For example, if the high value has been set to 10 and the low value 3, then a value between 3 and 10 will appear. XXX will show 'Off' if that control within the Touchpad is not activated. Both the X-axis (horizontal) and Y-axis (vertical) can be assigned up to two parameters, shown by X1/X2 and Y1/Y2. For example, filter frequency and delay time could both be set to the X-axis, whilst filter resonance and delay feedback are both assigned to the Y-axis. Alternatively, just one control could be assigned to one axis if a simpler function is required.

Display of sustain pedal

If a sustain pedal is connected to the ReMOTE LE's rear panel input and activated during PLAY mode, the display will show:

```
       Sustain Pedal
        XXX     CC64
```

XXX shows 'On' if the MIDI value sent is 64 or 'Off', if the MIDI value sent is less than 64.

Program mode

In this mode, the PROGRAM LED below the LCD screen will light and the DATA encoder is used to send a MIDI Program Change command out to the MIDI or USB port. This will change the program number (loaded sound/patch) of the attached software/hardware synth. The Program Change number will vary from 0 to 127 and loop. The MIDI channel this data is sent on will be the same as that of the currently selected Template. The screen will show (where XXX = 0-127):

```
     MIDI Prog Chang:
                   XXX
```

Bank Mode

In this mode, the BANK LED below the LCD screen will light and the DATA encoder will be used send a MIDI Bank Change command out to the MIDI or USB port. This will change the bank number (loaded bank of sounds/patches) of the attached software/hardware synth. The Bank Change number will vary from 0 to 127 and loop. The MIDI channel the data will be sent on will be the same as that of the currently selected Template. The screen will show (where XXX = 0-127):

```
     MIDI Bank Chang:
                   XXX
```

Using menus – EDIT mode

This mode is used to either edit individual controls within one of the 16 onboard MIDI Templates or change the common Template parameters (the settings across all controls within the Template) such as the velocity curve that the keyboard is set to. The two different EDIT Mode menus are accessed by either the first or second press of the EDIT button. Pressing the EDIT button once, whereby the LED to the left of the button will illuminate constantly, activates the individual Template Edit menu for the currently selected template. Pressing the EDIT button twice, making the LED to the left of the button flash, accesses the Common Template Edit menu. To edit a Template, use the DATA encoder to scroll to it (must be in Template select mode in PLAY mode) then press the EDIT button once or twice as required.

Editing an individual onboard Template

After the EDIT button has been pressed once to activate the individual Template menu (the LED to the left of the button will be illuminated continuously) the MIDI data assigned to Knob 1 (in Group A) will be displayed on the LCD screen. Pressing/rotating/moving any of the ReMOTE LE's controls will call up the MIDI data for that particular control for editing on the LCD screen, by stepping through the pages of the individual Template Edit menu. The first option in the individual Template Edit menu is the type of MIDI data that the control has assigned to it. So, if the button/knob is set to a Continuous Controller number then the screen shows:

```
Control Type:
           CC
```

The types of MIDI data available are:

CC	Continuous Controller. Any controller number can be used, however the MIDI standard defines controller numbers 0, 6, 32, 38, 96, 97, 98, 99, 100, 101 & 120-127 for specific purposes. These values should not be used unless the consequences upon the connected MIDI device are appreciated. (See MIDI tutorial on page 5 for more information)
NRPN	Non-registered Parameter Number
RPN	Registered Parameter Number
MMC	MIDI Machine Control. This can only be selected for buttons
Note On/Off	Note On/Note Off message. This can only be selected for buttons
Program Change	Program Change message. This can only be selected for buttons
Pitch Bend	Pitch Bend. This can only be selected for the X/Y touchpad (in addition to the joystick)
Aftertouch	Can be used to assign afterouch to a control, e.g. the X/Y touchpad
No Control	The control will transmit no MIDI when touched. There are no further menu pages available if this option is selected

To change between these types of MIDI data, simply rotate the DATA encoder. Once the type of MIDI data is selected, the remaining settings for that MIDI control can be defined by accessing the additional individual Template Edit menu options. This is done using the OCTAVE UP and OCTAVE DOWN buttons (right and left arrows) on the ReMOTE LE.

The above MIDI data may be applied to EACH of the nine knobs or nine buttons for Groups A and B, the transport controls, the pitch/mod wheel, any of the four parameters of the X/Y touchpad and a sustain pedal (if one is attached).

Individual Template Edit 'CC' menu options

Page no	Page name	DATA encoder selects
1	Control Type	Control type (see list above)
2	Control Number	0-127
3	Display Type	0-127 or -64 +64
4	Pot Control	'Jump' or 'Pickup' mode
5	Low Value	Low value of control
6	High Value	High value of control
7	Button Type	Action of button
8	Button Step Size	Size of increment
9	MIDI Channel	MIDI channel for this control
10	MIDI Port Routing	MIDI port for this control
11	Control Name	Name of control

Here is a detailed breakdown of each page of the individual Template Edit Menu once 'CC' has been selected on page 1:

Edit Menu Page 2 - Control Number

```
Controller Num
           119
```

This page allows you to select the Continuous Controller number. Rotating the DATA encoder scrolls through numbers 0 to 127.

Edit Menu Page 3 - Display Type

```
Display Type:
          XXX
```

This page chooses the specific values you wish the control to send, whether they are between 0 and 127 or -64 and +63. Rotating the DATA encoder selects either XXX = 0 - 127 or XXX = -64 to +63 as the range for the control. For example, if wanting to assign the volume of a track to a knob then 0-127 would be preferable, whereas the pan would suit -64 to +63.

Edit Menu Page 4 – Pot Control

```
┌─────────────────────────────┐
│         Pot Control:        │
│                     XXX     │
└─────────────────────────────┘
```

Here, XXX = Pickup or Jump, representing the two types of pot (knob) behaviour. Pickup mode means that the pots (knobs) only transmit MIDI data once they have passed through the value of MIDI data set to that control in the currently selected Template, whereas Jump mode transmits MIDI data as soon as the knob is rotated.

Edit Menu Page 5 - Low Value

```
┌─────────────────────────────┐
│          Low Value:         │
│                     XXX     │
└─────────────────────────────┘
```

XXX can be set to a value between 0 and 127 or -64 and +63 (depending on how page 3 of this menu is set) using the DATA encoder. This is the lower limit of the control, which will often be 0 or -64 but in the case of wanting to set a control to vary from 20 to 30, it would be 20.

Edit Menu Page 6 - High value

```
┌─────────────────────────────┐
│         High Value:         │
│                     XXX     │
└─────────────────────────────┘
```

XXX can be set to a value between 0 and 127 or -64 and +63 (depending on how page 3 of this menu is set) using the DATA encoder. This is the upper limit of the control, which will often be 127 or +63 but in the case of wanting to set a control to vary from 20 to 30, it would be 30.

If this value is set to be lower than the Low Value on the previous menu page then the control will effectively be reversed. For example, rotating the knob clockwise would reduce the value.

Edit Menu Page 7 - Button Type

```
┌─────────────────────────────┐
│         Button Type:        │
│                     XXX     │
└─────────────────────────────┘
```

This page allows you to select the way the button will behave, with XXX selectable as either Normal, Momentary, Toggle or Step using the DATA encoder.

Explanation of Button Types

Normal - the low value will be sent out as a MIDI message on depression of the button. There will be no action on release of the button.

Momentary - the low value will be sent out as a MIDI message on depression of the button and the high value sent on release.

Toggle - when the button is pressed for the first time the high value is sent. The next press causes the low value to be sent. The next press causes the high value and so on.

Step - on the first button press, the low data value is transmitted. Each subsequent button press increments in the amount set by the next Menu page, until the high data value has been reached. The next press results in the low value and so on. Data is only sent when the button is pressed not released.

These button options allow a range of applications to be easily controlled. For example if there is a button on a software synthesizer that has three options, then it may respond to a MIDI continuous controller number with a range of 0-2. When programming a button to control the software, the low value would be set to 0 (Menu page 4 - detailed above) and the high value would be set to 2 (Menu page 5 - detailed above). The step option would then be selected, with a step size of 1 (see below).

Edit Menu Page 8 - Button Step Size

```
┌─────────────────────────────┐
│          Step Size:         │
│                     XXX     │
└─────────────────────────────┘
```

This page defines the size of increment of MIDI data each time the button is pressed when in Step mode, allowing a small range of options to be controlled by a large range of MIDI values. Rotating the DATA encoder selects a value for XXX between 0 and 127.

For example, a soft synth may have waveforms altered by particular controller numbers spread evenly between 0 and 127 (e.g sine from 0-31, square from 32-63, triangle from 64-95 and sawtooth from 96-127). In that instance, it is best to use a knob sweeping across the whole range or a button that moves in steps of 32. To assign a button to move in steps for this purpose, simply choose 0-127 on page 3, then set 0 as the low value and 127 as the high value, choose Step as the button type and select a step size of 32.

Edit Menu Page 9 - MIDI Channel

```
┌─────────────────────────────┐
│        MIDI Channel:        │
│                     XX      │
└─────────────────────────────┘
```

XX is set to any of the 16 MIDI channels using the DATA encoder. This means that all CC MIDI data assigned to the control will be transmitted on that MIDI channel.

Edit Menu Page 10 - MIDI Port Routing

```
┌─────────────────────────────┐
│          MIDI Port:         │
│                     XX      │
└─────────────────────────────┘
```

This page allows the port that the MIDI data is transmitted on to be chosen. XX may be one of three options:

U - USB port
M - MIDI Out
UM - USB and MIDI Out

Edit Menu Page 11 - Control Name

```
┌─────────────────────────────┐
│      Control Name:          │
│      Amp Env Attack         │
└─────────────────────────────┘
```

The DATA encoder is used to change the currently selected letter (with the cursor positioned below it) between A-Z and 0-9 and the cursor is moved left and right using the REWIND and FAST FORWARD transport controls.

NB: At any time whilst in EDIT mode, rotating/pressing a knob/button will cause it to become the control for editing regardless of which menu page is currently selected in the individual Template Edit menu.

Individual Template Edit 'NRPN' menu options

Page 1 is the same for all Template Edit menus (Control Type - see page 11 for details).

Page No	Page Name	DATA encoder selects
2	NRPN LSB Number	LSB of NRPN (0-127)
3	NRPN MSB Number	MSB of NRPN (0-127)
4	Display Type	Display type 0-127 or -64 +64
5	Low Value	Low value
6	High Value	High value
7	Button Type	Action of button
8	Button Step Size	Size of increment
9	MIDI Channel	MIDI channel for this control
10	MIDI Port Routing	MIDI port for this control
11	Control Name	Name of control

Here is a detailed breakdown of each page of the individual Template Edit Menu once 'NRPN' has been selected on page 1:

Edit Menu Page 2 - LS Bank number selection

```
┌─────────────────────────────┐
│    NRPN LSBank Num:         │
│                 XXX         │
└─────────────────────────────┘
```

This page allows the Least Significant Bank controller number of the NRPN control to be changed (see page 6 of the MIDI Tutorial for more information). The DATA encoder scrolls through values of XXX from 0 - 127.

Edit Menu Page 3 - MS Bank number selection

```
┌─────────────────────────────┐
│    NRPN MSBank Num:         │
│                 XXX         │
└─────────────────────────────┘
```

This page allows the Most Significant Bank controller number of the NRPN control to be changed (see page 6 of the MIDI Tutorial for more information). The DATA encoder scrolls through values of XXX from 0 - 127.

The remainder of the individual Template Edit menu for NRPNs is exactly the same as pages 4 to 11 of the menu for CC data (see previous pages).

Individual Template Edit 'RPN' menu options

Page 1 is the same for all Template Edit menus (Control Type - see page 11 for details).

Page No	Page Name	DATA encoder selects
2	RPN LSB Number	LSB of RPN (0-127)
3	RPN MSB Number	MSB of RPN (0-127)
4	Display Type	Display Type 0-127 or -64 +64
5	Low Value	Low value
6	High Value	High value
7	Button Type	Action of button
8	Button Step Size	Size of increment
9	MIDI Channel	MIDI channel for this control
10	MIDI Port Routing	MIDI port for this control
11	Control Name	Name of control

Here is a detailed breakdown of each page of the individual Template Edit menu once 'RPN' has been selected on page 1:

Edit Menu Page 2 - LS Bank number selection

```
┌─────────────────────────────┐
│    RPN LSBank Num:          │
│                 XXX         │
└─────────────────────────────┘
```

This page allows the Least Significant Bank controller number of the RPN control to be changed (see page 6 of the MIDI Tutorial for more information). The DATA encoder scrolls through values of XXX from 0 - 127.

Edit Menu Page 3 - MS Bank number selection

```
┌─────────────────────────────┐
│    RPN MSBank Num:          │
│                 XXX         │
└─────────────────────────────┘
```

This page allows the Most Significant Bank controller number of the RPN control to be changed (see page 6 of

the MIDI Tutorial for more information). The DATA encoder scrolls through values of XXX from 0 - 127.

The remainder of the individual Template Edit menu for RPNs is exactly the same as pages 4 to 11 of the menu for CC data (see previous pages).
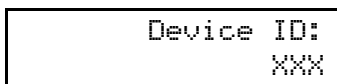
Individual Template Edit 'MMC' menu options

Page 1 is the same for all Template Edit menus (Control Type - see page 11 for details).

| Page No	Page Name	DATA encoder selects
2	Device ID	Value between 0 and 127
3	MMC Command	Type of MMC message
4	MIDI Port Routing	MIDI port for this control
5	Control Name	Name of control

Here is a detailed breakdown of each page of the individual Template Edit menu once 'MMC' has been selected on page 1. Note that MMC can only be selected for buttons:

Edit Menu Page 2 - Device ID

```
          Device ID:
                XXX
```

This page selects the device ID number for the MMC message. Rotating the DATA encoder selects a value for XXX between 0 and 127.

Edit Menu Page 3 - MMC Command

```
        MMC Command:
                XXX
```
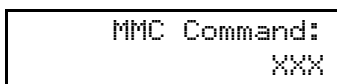
This page selects the type of MMC message that is transmitted. XXX is selected to be one of the following choices: Stop, Play, Def Play, Forward, Rewind, Record, Record Exit, Record Pause, Pause, Eject, Chase, Err Reset, MMC Reset.

The remaining pages of the menu for MMC messages are identical to the corresponding pages for CC data (see previous pages).

Individual Template Edit 'Note On/Off' menu options

Page 1 is the same for all Template Edit menus (Control Type - see page 11 for details).

| Page No	Page Name	DATA encoder selects
2	Note Value	Selects the MIDI note value
3	Note Velocity	Sets the note velocity
4	Button Type	Action of button
5	MIDI Channel	MIDI channel for this control
6	MIDI Port Routing	MIDI port for this control
7	Control Name	Name of control

Here is a detailed breakdown of each page of the individual Template Edit menu once 'Note On/Off' has been selected on page 1. Note that Note On/Off can only be selected for buttons:

Edit Menu Page 2 - Note Value

```
         Note Value:
                XXX
```
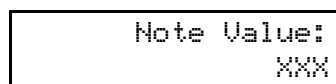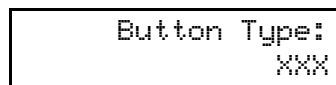
This page selects any MIDI note to be played when the button is pressed. Rotating the encoder selects the value of XXX as C-2, C#-2, D-2... etc. all the way to ...A7, A#7, B7, C8.

Edit Menu Page 3 - Note Velocity

```
       Velocity Value:
                XXX
```
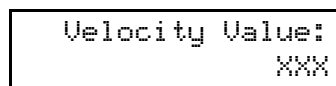
This page allows the velocity value of the control to be chosen, with XXX set to a value between 0 and 127 by the DATA encoder.

Edit Menu Page 4 - Button Type

```
         Button Type:
                XXX
```

This page allows you to select the way the button will behave, with XXX selectable as either Normal, Momentary or Toggle using the DATA encoder.

Explanation of button types

Normal - the Note On data will be sent out as a MIDI message on depression of the button. There will be no action on release of the button. (Not normally advisable as this means the note will sustain indefinitely.)

Momentary - the Note On data will be sent out as a MIDI message on depression of the button and the Note Off sent on release.

Toggle - when the button is pressed for the first time the Note On data is sent. The next press causes the Note Off data to be sent. The next press causes the Note On data to be sent and so on.

The remaining pages of the menu for Note On/Off messages are identical to the corresponding pages for CC data (see previous pages).

Individual Template Edit 'Program Change' menu options

Page 1 is the same for all Template Edit menus (Control Type - see page 11 for details).

Page No	Page Name	DATA encoder selects
2	Program Change	Program Change value
3	MIDI Channel	MIDI channel for this control
4	MIDI Port Routing	MIDI port for this control
5	Control Name	Name of control

Here is a detailed breakdown of each page of the individual Template Edit menu once 'Program Change' has been selected on Page 1. Note that Program Change can only be selected for buttons:

Edit Menu Page 2 - Program Change

```
Prog Chg Value:
              XXX
```
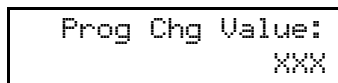
This page allows a Program Change data value to be selected by rotating the DATA encoder to make XXX a value of between 0 and 127. Be aware that some MIDI devices number programs from 1 to 128 instead of 0 to 127; in this case, the number 1 (on the MIDI device) will correspond to 0 (on the ReMOTE LE) and 128 (on the device) to 127 (on the LE).

When set to a Program Change type control, a button will only function in Momentary mode. That is, when pressed the Program Change data will be transmitted. When released, a Note off will be transmitted.

The remaining pages of the menu for Program Change messages are identical to the corresponding pages for CC data (see previous pages).

Individual Template Edit 'Pitch Bend' menu options

Page 1 is the same for all Template Edit menus (Control Type - see page 11 for details). Note that this can only be assigned to the joystick or X/Y touchpad.

Page No	Page Name	DATA encoder selects
2	MIDI Channel	MIDI channel for this control
3	MIDI Port Routing	MIDI port for this control
4	Control Name	Name of control

As there are no other parameters to define, once 'Pitch Bend' has been chosen on page 1, the menu moves straight to the MIDI Channel page. These last pages are identical to the corresponding pages for CC data (see previous pages).

Individual Template Edit 'Aftertouch' menu options

Page 1 is the same for all Template Edit menus (Control Type - see page 11 for details).

Page No	Page Name	DATA encoder selects
2	MIDI Channel	MIDI channel for this control
3	MIDI Port Routing	MIDI port for this control
4	Control Name	Name of control

As there are no other parameters to define, once 'Aftertouch' has been chosen on page 1, the menu moves straight to the MIDI Channel page. These last pages are identical to the corresponding pages for CC data (see previous pages).

Common Template Edit menu options (e.g. setting keyboard velocity)

Pressing the EDIT button twice will access the common Template Edit mode, which allows settings that effect ALL controls within the currently selected Template to be modified (e.g. keyboard velocity). Once in this mode, the LED to the left of the EDIT button will flash.

The menu pages in common Template Edit mode are as follows:

Page No	Page Name	DATA encoder selects
1	Override Channel	MIDI channel 1-16
2	Keyboard Channel	MIDI channel 1-16
3	MIDI Port Routing	MIDI port
4	Velocity Curve	Velocity curve 1-8
5	Touchpad X Control	Touchpad X Function
6	Touchpad Y Control	Touchpad Y Function

Edit Menu Page 1 - Override Channel

```
Override MIDI Ch:
          XXX
```

This page allows the user to quickly set all controls (knobs and buttons within the current template) to send data on the same MIDI channel without having to individually edit each control. XXX can be set as 'Off' or a value between 1 and 16 as required, using the DATA encoder. If MIDI channel 4 is selected then all controls will output data on MIDI channel 4 despite how they have been individually assigned.

Edit Menu Page 2 - Keyboard Channel

```
Keyb MIDI Chan:
           XX
```

This page defines the MIDI channel that the keyboard will transmit MIDI data on. Rotating the DATA encoder will select a value of XX between 1 and 16. NB: The MIDI channel for the pitch/mod joystick is separate from this and programmable from within the individual Template (its MIDI channel can also be overridden using the previous menu page).

*Edit Menu Page 3 - MIDI Port Routing*

```
MIDI Port:
        XX
```

This page allows the port that the MIDI data is transmitted on to be chosen. XX may be one of three options:
U - USB port
M - MIDI Out
UM - USB and MIDI Out

Edit Menu Page 4 - Velocity Curve Select

```
Velocity Curve:
       X
```

This page allows a velocity curve for the ReMOTE LE keyboard to be selected; this is the ratio of velocity of transmitted data (relating to volume of sound) to the force with which the keys are pressed. Rotating the DATA encoder selects between curves 1-8. The velocity curves available are as follows:
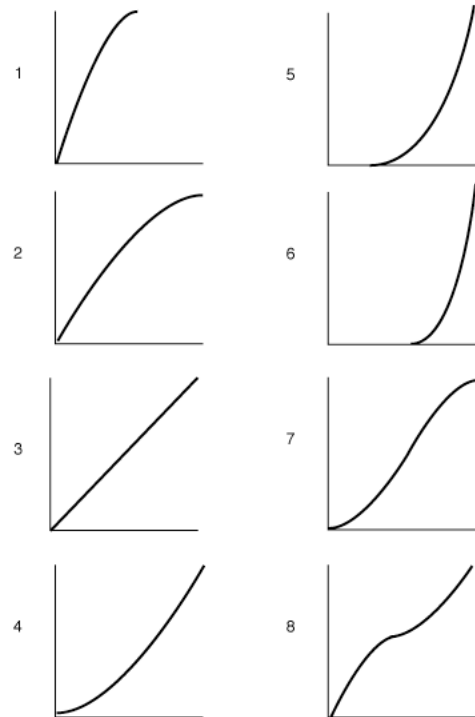
Curve 3 is the default setting. If a softer touch is required (lighter key presses giving the same velocity output) then try selecting curve 1 or 2. Alternatively, curves 4, 5 and 6 provide a harder response.

Edit Menu Page 5 - X/Y touchpad X Control

```
Touchpad X Type:
           XXX
```

This page selects the type of X/Y touchpad X-axis (horizontal) action. Rotating the DATA encoder scrolls between three modes for XXX: No Spring, Spring Left and Spring Center.

No Spring - as soon as a finger is released from the touchpad, the value of the touchpad will remain in the last touched position. A subsequent touch to the pad will result in a shift (at a sensible rate) to the new touch value.

Spring Left - as soon as a finger is released from the Touchpad, the value of the Touchpad will shift back to the far left (to a value of zero if 0-127 has been defined for this axis, or to a value of -64 if -64-+63 is assigned to it).

Spring Centre - as soon as a finger is released from the Touchpad, the value of the Touchpad will shift to the centre point of that axis (to a value of 64 if 0-127 is defined for that axis, or to a value of 0 if -64-+63 is assigned to it).

Edit Menu Page 6 - X/Y touchpad Y Control

```
Touchpad Y Type:
              XXX
```

This page selects the type of X/Y touchpad Y-axis (vertical) operation. Rotating the DATA encoder scrolls between three modes for XXX: No Spring, Spring Left and Spring Center. See previous section for definitions. See next section for more information on how to assign MIDI data to the touchpad.

Using the X/Y touchpad
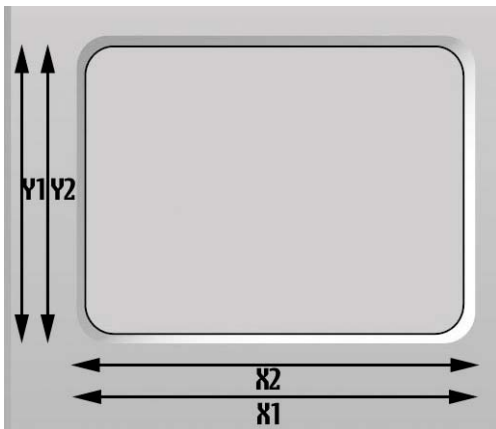
The touchpad allows transmission of up to four MIDI data values, two on the X-axis (horizontal) and two on the Y-axis (vertical). The MIDI data transmitted depends on how a finger moves along the touchpad; by moving a finger in a diagonal direction, both X- & Y-axis data is generated simultaneously. Alternatively, just moving a finger along the bottom of the touchpad will only transmit X-axis data.

Using the touchpad in PLAY mode
In PLAY mode, the display will show the values being sent out to the USB port and/or MIDI out, for example:

```
X1 = 105 Y1 = 056
X2 = 087 Y2 = Off
```
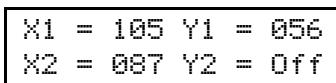
If any of the X or Y controls have been set to 'No Control', then the display will show 'Off' for that control. In the example above, the Y2 control has been set to 'No control', so only one parameter is assigned to the Y-axis but two to the X-axis. This display allows the exact size of each

parameter on each axis to be viewed while in use, it does not allow the viewing of the type of MIDI data assigned to each axis. EDIT mode must be selected to view the details of the MIDI data being transmitted by each axis (see below).

Using the touchpad in EDIT mode
By pressing the EDIT button once and entering the individual Template Edit mode (the LED to the left of the button will illuminate not flash), the MIDI data assigned to the touchpad for the currently selected Template can easily be viewed and edited, as with any of the ReMOTE LE's controls. Selecting either X1, X2, Y1 or Y2 for edit is slightly different than editing any other control as there are essentially four different controls on the one touchpad. With other assignable controls (knobs and buttons), simply moving the control will suffice but these only have one parameter assigned to them at any one time. With the touchpad in EDIT mode, there needs to be a way of calling up any of the four parameters for edit. This is done by dividing the touchpad into four quadrants, as follows:
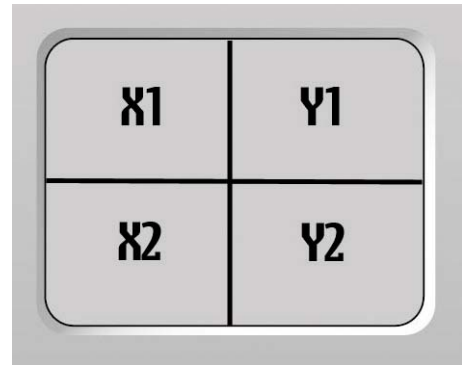

Simply pressing and holding the touchpad in one of the quadrants as shown in the diagram will first display all MIDI data assigned to that control within the touchpad, as follows:

```
Filter Freq
  55    CC74
```
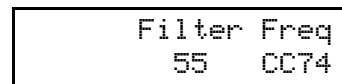
If the X1 quadrant had been pressed, this would signify that Filter Frequency had been assigned to the first parameter on the X-axis (horizontal) on Continuous Controller number 74, at a current value of 55.

Then the display will move to the first page of the individual Template Edit menu as it would do if any assignable control was touched in this mode, showing the following:

```
Control Type:
            CC
```
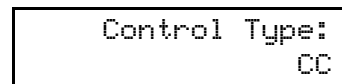
Now, whatever control within the Touchpad was pressed (X1, X2, Y1 or Y2) can be edited the same way as any assignable control on the ReMOTE LE. See the individual Template Edit mode menu on pages 11-15 for more information on how to do this.

Using a sustain pedal

The sustain pedal socket on the rear panel can be used to plug in a pedal to sustain notes, in a similar manner to the sustain pedal on a piano. This pedal is set to CC number 64 in the factory preset Templates but can be changed in the same way as any other assignable control.

In PLAY mode, the display will show the following when the pedal is activated (providing no edits have been made to its function):

```
    Sustain Pedal
          127   CC64
```

The value on the far left shows 127 to signify that the footswitch has been activated and is now 'On'. There are two settings, 'On' (greater than 64 is transmitted) and 'Off' (less than 64 is transmitted).

In EDIT mode, the data assigned to the footswitch can be changed as with any assignable control. Simply press the EDIT button once to enter individual Template Edit mode (the LED to the left of the button will illuminate continuously, not flash) then press down on the footswitch to call up the first page of the Edit menu for that control.

Using the transport buttons
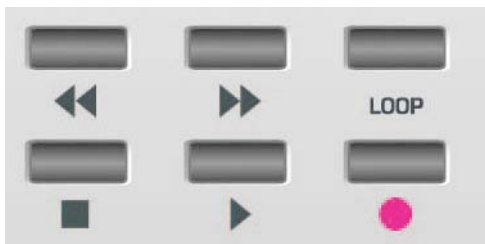
These six buttons are ideally suited for controlling the transport bar within recording/sequencing software as they are permanently labeled with icons for 'Play', 'Stop', 'Record', 'Fast Forward', 'Rewind' and 'Loop'. Many of the Templates within the ReMOTE LE are used to control sequencers without a fixed MIDI spec, e.g. Cubase, Logic etc. For these Templates, the relevant resource/learn file on the accompanying CD-ROM must be imported into the software for all controls to work. Read the text file within the relevant software folder on the CD-ROM for instructions on how to do this.

The transport buttons may be defined in the same manner as any of the other assignable buttons in individual Template Edit mode. Therefore, they can alternatively be assigned to transmit MIDI MMC (MIDI Machine Control) commands. Each of the 16 onboard Templates can hold its own set of definitions for these six buttons. The details of assigning MMC to these buttons and the range of MMC commands available is described in detail on page 14.

Most if not all sequencers (such as Cubase) use other types of MIDI data for remote control purposes such as CC or MIDI Note messages. The transport buttons can of course

be configured to transmit these instead of MMC in the normal way. Consult your sequencer documentation for full details of the MIDI messages used for remote control purposes.

Using the OCTAVE UP/DOWN buttons

These buttons are dual function. They function in the normal manner in PLAY mode, shifting the ReMOTE LE keyboard up and down in octaves across the whole MIDI Note range. For example, if the OCTAVE UP button is pressed once then the screen will show:

```
    Keyboard Octave:
                  +1
```

The range of the keyboard on the ReMOTE 25 LE will now relate to MIDI Notes 60-84 (C4-C6), in other words beginning at Middle C and ascending two octaves.

When in any of the EDIT modes or the GLOBAL mode, the OCTAVE UP/DOWN buttons are used to scroll between menu pages.

Saving a Template to memory

Once some edits have been made to an existing Template or an entirely new one has been constructed, the Template must be saved to the onboard memory in order to recall that Template at a later date. The other alternative is to send the Template to the Template Editor application that can be downloaded from novationmusic.com and then save it to the desktop. If saving onboard though, simply pressing the WRITE button will move through the saving procedure. After pressing once, the screen shows:

```
            V-Station
    To Template   XX
```

V-Station is the name of the currently selected Template and XX is the number (from 1-16) of that Template. Simply rotate the DATA encoder to select a different Template number if required, then press WRITE again to save the current settings to that Template number.

If after the first press of the WRITE button, the screen shows…

```
              MEMORY
           PROTECTED
```

(The message will appear for 1/2 second and then the ReMOTE LE will return to PLAY mode.)

…then the ReMOTE LE GLOBAL setting has activated Memory Protect, which will mean onboard Templates cannot be overwritten. See the GLOBAL memory details on page 20 for more details.

Providing Memory Protect (in the GLOBAL menu) is off, once the WRITE button has been pressed for a second time, the LCD display will show:

```
Template Name?
  Fred Station
```

The name of the Template can now be modified if required by using the DATA encoder to change the character from 0-9 or A-Z and the REWIND and FAST FORWARD transport controls to move the cursor.

Pressing the WRITE button a third time will show the following (final) screen for around 1/2 second, before returning to EDIT mode:

```
TEMPLATE SAVED
```

It is possible to abort the WRITE procedure at any stage by pressing another Mode/Menu button (e.g. PLAY, EDIT, GLOBAL). The WRITE button is only active in certain areas on the EDIT and GLOBAL menus.

If a Template is not saved to the ReMOTE LE memory or sent to the Template Editor before selecting another Template in PLAY mode or turning off the ReMOTE LE, then the settings will be lost forever. However, there are only 16 onboard Templates and overwriting one will replace it forever. So it is advisable to install the Template Editor so that Templates can easily be sent back and forth between the ReMOTE LE and a computer.

The Template Editor has a 'Restore Factory Templates' button embedded within its 'Bulk Dumps' menu so overwriting factory Templates is not a problem. Additionally, the editor allows the upload of the numerous extra Templates available for the ReMOTE LE from novationmusic.com.

Advanced Settings

GLOBAL edit mode

Once the GLOBAL button has been pressed, GLOBAL edit mode is active and the LED to the left of the button will illuminate. Now the GLOBAL settings (those affecting the ReMOTE LE across ALL Templates) can be set, navigating through menu pages with the OCTAVE UP/DOWN buttons and selecting different options within each page with the DATA encoder.

Global Menu Page 1 - Memory Protect

```
  Mem Protect: XXX
```

This page of the menu allows protection of the ReMOTE LE onboard memory to be activated. Using the DATA encoder to select XXX as 'On' will mean that none of the 16 onboard Templates can be overwritten. Choosing 'Off' will mean that the WRITE button procedure for saving onboard Templates can be carried out.

Global Menu Page 2 - Dump Template(s)

```
               Dump:
    Current Template
```

This page allows an individual onboard Template or set of all 16 Templates to be dumped (sent) to a destination, most likely the ReMOTE LE Template Editor. Rotating the DATA encoder selects between 1-16 or 'All Templates'. Pressing the WRITE button once will then send the currently selected Template(s) to the receiving device as a sysex message. To indicate completion, the screen will flash:

```
                DONE
```

Global Menu Page 3 - Calibrate Pitch/Mod Wheel

```
     Cal Pitch/Mod:
       ———      ———
```

This page allows the pitch/mod joystick to be calibrated (set to the necessary data values for correct operation). To calibrate, simply move the joystick from extreme left to extreme right. The display should then show 0-255 under the word pitch. Then move the joystick from extreme top to extreme bottom. The display should then show 0-128 under the word mod.

Global Menu Page 4 - Set Display Timeout

```
    Display Timeout:
                 XXX
```

This page sets the amount of time that the LCD display shows temporary screens such as the MIDI data when an assignable control is moved. Rotating the DATA encoder sets XXX at a value between 0 - 127, where each value represents 10ms, e.g. a setting of 50 would be 500mS, which equals 1/2 second.

Global Menu Page 5 - Reverse Sustain Pedal

```
     Sustain Pedal:
                 XXX
```

This page sets the polarity of the sustain pedal so that, if one is connected, it will operate in 'Normal' or 'Reverse' mode. Rotate the DATA encoder to choose one or the other option.

The last page of the GLOBAL Edit menu is reserved for updating the operating system of the ReMOTE LE. See the next section for details.

Using the WRITE button in GLOBAL edit mode
The WRITE button saves any changes that have been made to the GLOBAL settings. Once pressed, the screen will briefly display the following message before returning to PLAY mode (and will set the currently selected Template to be the default):

```
       GLOBALS SAVED
```

Updating the operating system

The last page of the GLOBAL Edit menu allows a new operating system to be received by the ReMOTE LE. To access this page, press the GLOBAL button so that the LED to the left of it illuminates, then scroll using the OCTAVE UP (right arrow) button to page 6 so that the screen shows:

```
    New O/S from USB
       Press Write…
```

Now press the WRITE button to put the ReMOTE LE in 'waiting' mode, and transmit the OS update from the Template Editor running on an attached computer.

Troubleshooting

LEDs and LCD Display on ReMOTE LE aren't working
- Does the unit have power? This can either be supplied by USB, batteries or mains adaptor.
- Is the power switch on the rear panel set to the correct position? Either USB or batteries/PSU.

Cannot select Templates on ReMOTE LE
- Is the unit powered correctly? See above.
- Is the Unit in PLAY mode? The PLAY button (to the left of the display) must be active with the corresponding LED illuminated.
- Is the unit in Template mode within PLAY mode? The Template LED must be illuminated. If it isn't, press the SELECT button to the right of it to cycle through the PLAY modes until the TEMPLATE LED is active.

The currently selected Template isn't working properly
- Is the ReMOTE LE correctly connected to the receiving device (computer or MIDI Instrument)? A MIDI cable will need to be connected from the MIDI Out of the ReMOTE LE to the MIDI In of the MIDI instrument if additional hardware is in use.
- Is the receiving device set to receive MIDI from the ReMOTE LE? Software will need to have the ReMOTE LE selected as the MIDI input device within its 'Preferences' settings or similar.
- If a MIDI instrument or sound module is connected, is it set to receive MIDI data on the same channel as that Template?
- If using the Template to control a sequencer such as Cubase, has the relevant Learn file been imported into the sequencer from the accompanying CD-ROM (see 'Controlling a sequencer' section on page 3).
- Has an override MIDI channel been selected in the Template common edit menu? See page 16 for details.

Computer is failing to recognize the ReMOTE LE as a valid controller
- Is the computer running on OSX or Windows XP? These are the only supported operating systems and must be used for the ReMOTE LE to work.

Transport controls are not causing the sequencer to start/stop/forward etc.
- Even with the correct Template loaded, the transport controls will need to be learned by the software and vice versa. (See page 18 for details on assigning transport controls).

Transmitting MIDI Program Change does not affect a connected MIDI device
- Some MIDI devices will not accept Program Change messages without receiving a Bank Select (CC32 or CC0) first.

Transmitting Bank Select does not affect a connected MIDI device
- The ReMOTE LE sends a Bank Select message using CC32. Some MIDI devices use CC0 for this purpose. It may be necessary to configure a control in a Template to send CC0 instead.

External PSU (not supplied) is not powering the ReMOTE LE
- Does the PSU provide a 9V DC supply?
- Is the polarity of the adaptor correct? Centre pin must be positive.

For more information and tips on using the ReMOTE LE, visit novationmusic.com/support.asp

Appendix I – Specifications

Keyboard

Keys:	25
Type:	Semi-weighted
Velocity curves:	8

Pitch and mod wheel mechanism

Pitch wheel lever:	Rubberised - centre return spring loaded left to right motion
Mod/control lever:	Rubberised - spring loaded front to back motion

X/Y touchpad

Touchpad:	1 x touch sensitive 45x60mm
Parameters:	2 assignable in X direction
	2 assignable in Y direction

LCD display

LCD:	2 x 16 character silver
	Blue LED backlit

MIDI interfacing

MIDI:	1 MIDI Out
USB MIDI:	1 In/1 Out

Other interfacing

Data ports:	1 x USB 1.1
Sustain pedal:	1 x 1/4" Jack Input

Controls

Rotary potentiometers:	9, 0-270° rotation
Rotary encoders:	1, 360° continuous DATA wheel
Transport controls:	Rewind/FF/Stop/Start/Rec/Loop
Buttons:	9 function switches
	Group B switch
General operation:	5 Mode and Menu select buttons
	Keyboard Octave Up and Down buttons

General

Battery operation:	6 x standard 'AA' Size
External power supply:	Standard 'centre positive' 9V DC 600mA (Novation PSU6)
Size:	468 x 68 x 190 (mm) w x h x d
Weight:	1.4kg

System requirements

Operating system:	Mac OSX 10.2.4 or greater or Windows XP
Computer spec:	Apple G3/400 GHz or Pentium 600 MHz or better
Interfacing:	USB 1.1 compatible USB connector

Templates (first 12 preset onboard, remaining on Novation website)

1. Novation V-Station
2. Novation Bass Station
3. Reason Subtractor
4. Reason Malstrom
5. Native Instruments FM7
6. Native Instruments Pro53
7. GMedia Oddity
8. Spectrasonics Trilogy / Stylus / Atmosphere
9. Ableton Live
10. General MIDI 2
11. Cubase
12. Logic 7
13. User 1
14. User 2
15. User 3
16. User 4

And many more, including…
Reason Sampler
Reason ReDrum
Reason Mixer
NI Reaktor
NI Absynth
NI Battery
NI B4
Steinberg Model E
Steinberg PPG Wave 2V
G-Media Oddity
Clavia Nord Lead 3
Korg MS2000
Access Virus A B C
Novation Supernova
Novation Super BassRack
Novation Bass Rack
Propellerheads RB338
Roland JP 8000/8080
Roland SH-32
Cakewalk Sonar

Appendix II – MIDI Implementation Chart

Function	Transmitted	Received	Remarks
Basic Default **Channel** Changed	1 - 16 1 - 16	X X	Memorised in Template data
Mode Default Messages Altered	 X ****************	X X	Memorised in Template Data
Note True **Number** Voice	0 - 127 ****************	X	
Velocity Note On Note Off	O v = 1 - 127 X	X X	Fixed Velocity used for button definitions
Aftertouch Keys Channel	X X	X X	
Pitch Bend	O	X	Combined Modulation & Pitch Bend joystick
Continuous Controller	0 - 127	X	
Program Change True	0 - 127 ****************	X	
System Exclusive	O	O	Single & All Template data dumps. OS upgrades
System Real-Time	X	X	
System Common	X	X	

Appendix III – Approvals Information

Important safety instructions

Warning - when using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions and observe the graphic symbols above before using the product.
2. Do not use this product near water - for example near a bathtub, washbowl, kitchen sink, in a wet basement, near or in a swimming pool, a swamp or the like.
3. This product should be used only with a cart or a stand that is recommended by the manufacturer.
4. The product should be located so that its location or position does not interfere with or obstruct its normal flow of ventilation.
5. The product should be located away from heat sources such as radiators, heat registers or other products that produce heat.
6. The product should be connected to a power supply only of the type described in these operation instructions or as marked on the product.
7. The power supply cord of the product should be unplugged from the outlet when the product is left unused for a long period of time.
8. Care should be taken so that objects do not fall, or liquids are not spilled into the enclosure through openings.
9. The product should be serviced by qualified service personnel when:
   A: The power supply cord has been damaged; or
   B: Objects have fallen or liquids have been spilled onto the product; or
   C. The product has been exposed to rain; or
   D. The product does not appear to operate normally or exhibits a marked change in performance; or
   E. The product has been dropped or the enclosure has been damaged.
10. Do not attempt to service the product beyond those means described in this operating manual. All other servicing should be referred to qualified service personnel.

FCC Information (USA)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT! This product, when installed as indicated in the instructions contained in this Manual, meets FCC requirements. Modifications not expressly approved by Novation may void your authority, granted by the FCC, to use the product.
2. IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.
3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

   - Relocate either this product or the device that is being affected by the interference.
   - Utilize power outlets that are on different branch (Circuit breaker or fuse) circuits or install AC line filter/s.
   - In the case of radio or TV interference, relocate/re orient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. The statements above apply ONLY to products distributed in the USA.

Canada

The digital section of this apparatus does not exceed the "Class B" limits for radio noise emissions from digital apparatus set out in the radio interference regulation of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la "Classe B" prescrites dans le reglement sur le brouillage radioelectrique edicte par le Ministere Des Communications du Canada.

This only applies to products distributed in Canada.
Ceci ne s'applique qu'aux produits distribues dans Canada.

Other Standards (Rest of World)

This product complies with the radio frequency interference requirements of the Council Directive 89/336/EC.

Dette apparat overholder det gaeldenda EF-direktiv vedr rendareadiostj. Cet appareil est conforme aux prescriptions de la directivecommunautaire 89/336/EC

Diese Gerte entsprechen der EG-Richtlinie 89/336/EC.

Specifications subject to change

The information contained in this manual is believed to be correct at the time of going to press. However, Novation reserves the right to change or modify the specification without notice or obligation to update existing units.