

[www.creekaudio.com](http://www.creekaudio.com)

# **EVOLUTION 50A**

Integrated Amplifier

## Instruction Manual

Thank you for purchasing a Creek Audio EVOLUTION 50A Integrated Amplifier. You are now in possession of a State of the Art performance product. The functions and operation of this integrated amplifier are simple, however, the following notes are provided to explain all aspects of its design and use.

Although this User Manual is intended to provide the latest instructions for use, it is possible that a later version may be available to download from the Creek website.

Please check at [www.creekaudio.com](http://www.creekaudio.com) *Go to the EVOLUTION 50A product page and click on the tab marked Instructions.*

Now please take a few minutes to register your new EVOLUTION 50A on the Creek website at [www.creekaudio.com/register.php](http://www.creekaudio.com/register.php).

## UNPACKING AND LOCATING THE AMPLIFIER

When unpacking the EVOLUTION 50A please keep all the packing material in a safe place for possible future use. In the carton there is a separate mains cable suitable for connecting to the mains supply in the country of use. You will also find a remote control unit and batteries.

Make sure that the EVOLUTION 50A is on a suitable table, shelf or hi-fi equipment cabinet.

It is important to allow good ventilation to the heat-sinks inside the case. Avoid obstruction of the ventilation slots on the top and bottom of the EVOLUTION 50A. It may be necessary to place the EVOLUTION 50A on the top of other equipment, or a separate shelf to allow for this. Do not place it at the bottom of a stack of equipment, as it may get too hot and switch-off, with an over-temperature warning on the display.

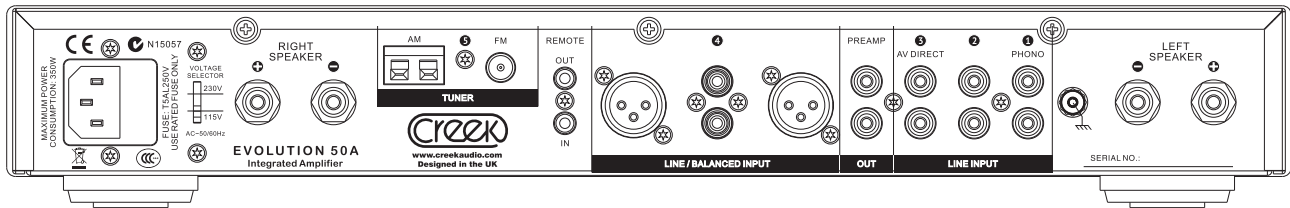
## MAINS CONNECTION

**IMPORTANT:** Before connecting the amplifier to the mains supply, please check that the voltage selector switch on the rear of the amplifier is set to the correct supply voltage for your region. Permanent damage can be caused by using an incorrect setting.

The IEC socket end of the supplied cable should be firmly inserted into the connector on the rear panel. Connect the mains plug to your AC outlet. Do not overload the mains outlet with too many plugs or adaptors. The high quality performance of the 50A may be impaired if the electrical supply to it is in poor condition. If in doubt, consult your hi-fi dealer, or a qualified electrician for advice.

The Mains Input connector on the rear panel is also fitted with a fuse in a pull-out drawer. The value of the 5 x 20mm cartridge fuse is clearly stated (T5AL 250V) next to the socket, on the rear panel. This means it is a 5 Amp Time-lag (Anti-surge) type fuse, rated at 250V. **Always replace the fuse with one of identical rating to prevent the risk of fire!**

# INPUT AND OUTPUT CONNECTIONS



On the rear panel there are 4 standard Line level\* inputs labelled 1-4. Some of these inputs can be configured for different requirements and these options are described below. Input configuration is controlled by a special menu which is available only during power-up, please see the section below.

*\*Line level refers to a standardised way of transferring audio signals between equipment. It is typically characterised by a voltage level of between 300mV and 2V r.m.s. The EVOLUTION 50A will accept levels between 0 to 5.4V r.m.s. and should therefore be compatible with all sources.*

**Line 1** is suitable for any source (CD, Tuner, Tape, etc), and can also be used as a dedicated MM / MC Phono Input when an optional Creek Plug-in Phono pre-amp is fitted. See separate section below.

**Line 2** is suitable for any line level source.

**Line 3** has two possible functions. Firstly as an additional line level input, equivalent to Line 2 or secondly, as a direct input to the power amp, bypassing the internal pre-amp and volume control. Known as “AV Direct” this is useful for AV applications where the EVOLUTION 50A can be used for the front Left and Right channel sound, with volume controlled by the AV receiver. This allows a multi-channel AV system to be integrated into your high quality 2-channel hi-fi system with ease. Simply connect the Line 3 input to your AV amplifier’s Front L/R pre-out connections.

**AV Direct** also makes it possible to “Slave” the amplifier to another EVOLUTION 50A using the pre-out connection, thus producing a bi-amplified system.

**Line 4** duplicates the dual functionality of the Line 3 input whilst also adding a different connection option. Connections for standard line level RCA jacks are provided but equipment with Balanced outputs\* can also be connected to the provided XLR input connectors. Use only one or other connection method, **not** both!

*\*Balanced outputs use a differential signalling technique which makes the interconnection much more resistant to external noise and interference. It is ideal for preserving signal fidelity, especially if long cable runs are required.*

As with Line 3 it is possible to input the signal directly to the power amp, bypassing the internal pre-amplifier. This feature, called “Line 4 Direct”, is intended for sources whose output is already influenced by another volume control, such as the **EVOLUTION 50D** DAC and CD player.

Pre-out is an output signal replicating the feed to the internal power amplifier section. It is affected by all the controls of the amplifier such as volume, tone etc. It allows the user to drive another power amp if required. This can be used to “bi-amplify” a suitably equipped pair of loudspeakers or to connect an active sub-woofer for example.

## CONFIGURING THE INPUTS

To access the input configuration menu the product must be switched off. Hold down the MENU key whilst turning on the power and release once you see the “Setup Menu” appear. Here you will see the options for input configuration and restoring factory defaults. The tree looks like this:

### Line 3 Options –

Line Level Input	Default setting. The input is conventional.
Power Amp Input	This bypasses the internal pre-amp giving “AV Direct” mode.

### Line 4 Options –

Line Level Input	Default setting. The input is conventional.
Power Amp Input	This bypasses the internal pre-amp giving “Line 4 Direct” mode.

### Factory Defaults

Restores all settings to original factory states.

Navigate using the left-hand rotary control; pressing the control selects the option. Once configured press the MENU key again and the product will start up with the new settings.

## ADDING THE INTERNAL PHONO STAGE OPTION

For added flexibility, the Line 1 input on the EVOLUTION 50A can be used either for vinyl disc (Phono) or line level. To listen to vinyl discs through the EVOLUTION 50A, it is necessary to fit the optional Creek plug-in – ‘Sequel Phono’ board. Check with your dealer for which version (MM40, MM48 or MC54) suits your cartridge. When the Phono PCB is fitted, it will automatically indicate Phono on the display, when selected. Alternatively, Creek Audio also produces a range of separate high-grade Phono pre-amplifiers, which can be connected to any input.

A GROUND terminal post is provided on the rear panel to connect your turntable's ground wire if provided.

## LOUDSPEAKER CONNECTIONS

The loudspeakers should be connected using a suitable pair of cables designed specifically for audio use. Check with your dealer for advice. The terminals allow for bare wire, 4mm plugs or spade lug connectors. Tighten the terminal fully after fitting the loudspeaker wire. Please consult your dealer for advice if you are unsure.

It is very important to connect the loudspeakers with the correct phase. Cables are normally polarised with a line or writing on the positive side to assist in this. Connect the red (or ‘positive’ or ‘+’) terminal of your loudspeaker to the red terminal of the amplifier and likewise for the black. If both channels are not connected with the same polarity, a severe loss of bass performance and lack of stereo image will result.

It is very important not to short the loudspeaker cables together when the EVOLUTION 50A is powered on, as permanent damage may result. Ensure there are no strands of cable bridging the terminals when connecting the loudspeakers and make all connections with the EVOLUTION 50A turned OFF. If it is necessary to change or move the location of the loudspeakers, make sure that you first power off the EVOLUTION 50A and then re-check the wiring once finished.

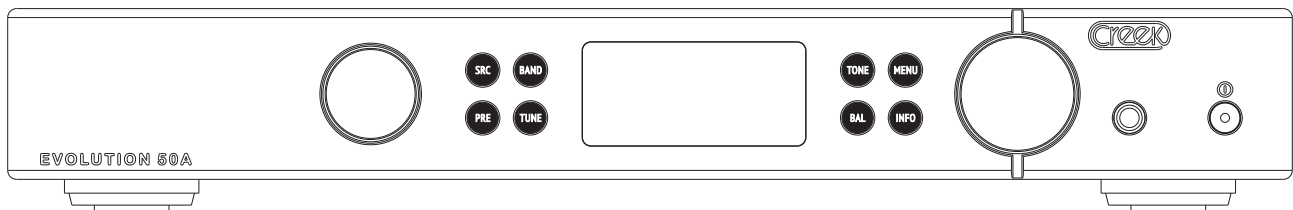
## REMOTE IN/OUT

The **EVOLUTION** range of products are equipped with remote control input and output jacks to allow the use of external infra-red (IR) sensors and to allow the products to “talk” with each other, forming an integrated system with additional features. The remote OUT jack is opto-isolated (electrically ‘floating’) to prevent any interference to the audio signals when linking equipment. Both IN and OUT jacks are in fact bi-directional for the signals but the IN jack also provides power which is used to run the external IR sensor or the opto-isolator circuitry on the OUT jack. Always connect an IN jack to an OUT jack on matching **EVOLUTION** range products, NEVER connect an IN jack to an IN jack as damage could result!

Because the connections are bi-directional there is no need to form a loop when connecting equipment together. A single cable between any pair of equipment is sufficient. The correct cable for connections is a STEREO (3-terminal) 3.5mm jack plug to jack plug cable, do NOT use mono (2-terminal) 3.5mm jack cables!

Connecting anything to the IN jack will disable the built-in IR sensor to prevent clashing of the signals. The remote connections carry standard demodulated remote control signals along with proprietary serial commands to synchronise various EVOLUTION products and carry out firmware updates.

## OPERATING THE EVOLUTION 50A



The front panel controls, from left to right, feature a rotary input selector knob, a group of 4 buttons marked SRC, PRE, TUNE, and BAND for the tuner, if fitted. Next is the OLED display window, then 4 more buttons marked TONE, MENU, BAL and INFO. The volume control, headphone socket and Power on/off switch complete the line up.

**NOTE:** All control settings are memorised, even when the power is turned off.

Turn on the power using the push-button on the right-hand side of the product. The display will show the Creek logo whilst the internal electronics are configured and allowed to settle. The amplifier is ready for use once the display changes to show selected input and volume settings.

The input is selected by the left-hand rotary control, rotate the control until the desired input is shown in the display. The inputs can also be chosen using the remote control. The volume can be adjusted via right-hand rotary control on the front panel or remotely with the EVOLUTION remote handset. Pressing the knob will toggle the mute condition on and off.

It is important to note that the power output of the amplifier is the product of both the volume setting AND the input signal level from the source equipment. Sources with a lower output signal will require a higher volume setting to reach the same loudness. Do not be worried if you find the volume is approaching 0dB to achieve the required listening level, it does not necessarily mean the amplifier is working harder or delivering its full capability.

The volume setting is remembered during power off but when the amplifier is turned back on, the value will be limited to a maximum -20dB to prevent unexpected loud sounds from being produced.

The MENU button offers some set-up options to tailor the operation of the EVOLUTION 50A to your preference. Pressing this button will reveal 3 options which can be highlighted using the left-hand rotary control. Depressing the rotary control will select the highlighted option to reveal further options. The options tree looks as follows:

#### **Display Settings -**

Always On	The OLED display will be lit at all times the product is operating
Auto Off	The OLED display will go out after a short delay

#### **Display Brightness -**

Full	Maximum screen brightness
Medium	
Low	Lowest screen brightness

#### **Headphone Switch -**

Disable Speakers	Inserting a headphone jack will mute the loudspeaker outputs
Simultaneous Use	Both loudspeakers and headphones will be active simultaneously

Configure the product to your taste by selecting the desired options with a press of the left-hand rotary control. Use the MENU key to exit.

The BAL (Balance) button allows adjustment of the relative levels of left and right channels. This is used to compensate for non-ideal loudspeaker placement or to isolate one channel of the audio signal. Once the BAL button has been pressed the right-hand rotary control adjusts the balance and the relative level difference is expressed on the display. To reset the balance to Centre, simply press the rotary control inwards. The characteristic of the control has been tailored to maintain the same perceived volume level from the system so as to allow easy adjustment.

The TONE button allows relative Bass and Treble levels to be adjusted if required. To maintain optimum sound quality, the tone control circuits are normally bypassed. To activate them, simply press and hold the TONE button until the display indicates "Tone On". Pressing the TONE button now cycles through Bass, Treble and Volume options. Adjustment of the tone is done with the right-hand rotary control and pressing the control will reset the value to zero. To disable the tone circuits again, simply press and hold the TONE button until the screen indicates "Tone Off". Tone settings are remembered even when the controls are bypassed allowing comparison of adjusted and "flat" settings.

## **PROTECTION**

The EVOLUTION 50A has short circuit (over-current), over-temperature and DC offset protection. The internal loudspeaker relay will isolate the output under any of these conditions and the display will indicate the cause. The loudspeakers will be re-connected after a delay as soon as the fault has cleared. If the over-temperature condition has occurred then please check the amplifier has adequate ventilation and that there are no faults with the loudspeaker wiring. Likewise, if the over-current protection has been activated then is highly likely there has been a short circuit of the loudspeaker wiring so please switch off the amplifier and check the wiring before continuing.

The 'DC presence' warning is either due to an internal fault with the amplifier or can sometimes be triggered by severe clipping (overload) of the amplifier. If the condition clears by itself try reducing the volume setting. Never drive your amplifier to levels which cause obvious distortion to be heard. This is an indication that either the amplifier or loudspeakers are being pushed beyond their capabilities and can result in permanent damage.

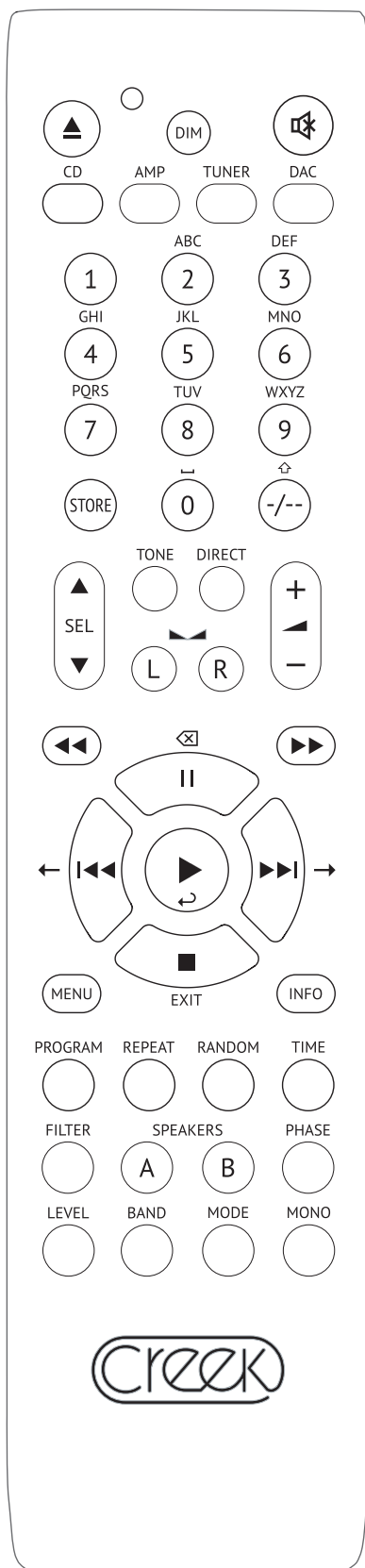
## **POWER CONSUMPTION**

It is appreciated by hi-fi enthusiasts that leaving equipment powered up continuously can improve the performance. However, this small improvement in sound quality comes at the expense of continuous power consumption from the mains, which will increase your electricity bill and also reduced working life of the product. The EVOLUTION 50A draws 20 Watts of power when switched-on and not producing a signal.

We recommend switching the EVOLUTION 50A off at the front panel if the equipment is not to be used for a period of time. Normal performance is achieved in a very short period of time due to the advanced circuitry in your EVOLUTION 50A amplifier.

Relays are used to route signals inside the EVOLUTION 50A and these produce a mechanical click sound when they operate, this is normal and does not indicate a malfunction with the product.





## REMOTE CONTROL

The EVOLUTION 50A's new remote control handset allows the user to operate the amp and CD/DAC/Pre and tuner functions. It should be noted that the EVO remote handset will only operate Creek's EVOLUTION 50 and 100 ranges of products and is not able to switch the mains power.

The operation of the remote is designed to be intuitive, so we do not intend to describe its functions in great detail here, have a play!

## FIRMWARE AND HARDWARE CONFIGURATION

It is possible to check the hardware and firmware status of your 50A on the display. Turn off the 50A and then, whilst holding down the INFO key, power up the EVOLUTION 50A. Once the screen has changed to "About this unit", release the INFO key. The firmware version will be displayed along with the presence/absence of a Sequel phono card and AMBIT tuner card. This information will be required in the event of an upgrade or service to the product.

## RADIO INTERFERENCE

The EVOLUTION 50A is designed to work properly in normal domestic operating conditions. However, its performance could be affected if sited near to a radio transmitter such as a mobile phone etc. Relocating the 50A or the radio transmitter will normalise the situation.

## FINAL WORDS

The EVOLUTION 50A is designed to provide years of reliable use. If you need more assistance, it is always advisable to go back to the supplying dealer for his expert help. If you are unfortunate enough to need service work to be carried out on your EVOLUTION 50A, it should be returned to your dealer in the original packing material if possible.

Creek Audio Ltd reserves the right to change or modify the specification of its products without prior warning.

If within two years of purchase date your EVOLUTION 50A proves to be defective for any reason other than accident, misuse, neglect, unauthorized modification, or fair wear and tear, Creek Audio Ltd. will, at its discretion, replace the faulty parts without charge for labour or return carriage within the United Kingdom. This warranty is valid only in the United Kingdom and given in addition to statutory rights. Service enquiries outside the United Kingdom should be addressed first to the supplying dealer and/or the Creek distributor/importer. See [www.creekaudio.com](http://www.creekaudio.com) for a list of distributors.

Warranties granted in these countries are entirely at the discretion of the distributor.

## Technical Specifications:

<b>Power output @ 1% THD</b>	>55 Watts into 8 Ohms, both channels driven
<b>Power output @ 1% THD</b>	>85 Watts into 4 Ohms, both channels driven
<b>Continuous output current</b>	>8.5A (sine wave)
<b>Peak output current, burst into 0.5 Ohms</b>	+/-26 Amps
<b>THD and Noise, 2/3 rated power 8 Ohms</b>	< 0.005%
<b>Signal to Noise</b>	102dBA Line input
<b>Frequency Response</b>	<10Hz to >100 kHz +/-2dB (LINE) <10Hz to >50 kHz +/-2dB (Balanced)
<b>Gain at 1 kHz Un-balanced</b>	33.3dB (x 46)
<b>Gain at 1 kHz Balanced</b>	27.0dB (x 22.5)
<b>Input sensitivity, Line level</b>	410mV
<b>Maximum input voltage, RCA and Balanced (XLR)</b>	5.4V and 10.8V r.m.s.
<b>Crosstalk</b>	-80dB at 1 kHz
<b>DC offset</b>	< +/-10mV
<b>Pre-Amp Inputs</b>	4 x RCA un-balanced, including optional Sequel Phono plug-in PCB
<b>Plug-in Phono options</b>	Input 1 changes to Phono with Sequel Phono fitted. Gain: 40, 48 or 54dB
<b>Power amp inputs</b>	Inputs 3 & 4 can be assigned as Power Amp direct inputs
<b>Tuner option</b>	AMBIT FM/AM tuner module (optional extra)
<b>Remote IN jack</b>	Powered output for external IR sensor or Serial connection to Evo products
<b>Remote OUT jack</b>	Serial connection to other Evo system components
<b>Loudspeaker Outputs</b>	1 pair of binding posts for use with Spade Lugs 4mm plugs or bare wire
<b>Output impedance</b>	<0.1 Ohms at 1 KHz and 8 Ohms
<b>Headphone Output</b>	1 x 6.3mm with Low impedance output (<50 Ohms)
<b>Mains voltage</b>	230/115V 50/60Hz, switchable
<b>Front panel finish options</b>	Silver or Black
<b>Power Consumption: Idle, Max, Standby</b>	<20 Watts, 350 Watt, No standby
<b>Weight</b> net	7.5kgs (16.5 lbs)
<b>Size W/H/D</b> inc. feet and knobs	430 x 60 x 280mm (17 x 2.3 x 11")

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Creek products, designed and engineered in the United Kingdom, are distributed in more than 40 countries worldwide. For details visit the Creek Audio website.