

# Classique Accompaniment C6

6 Channel Stereo Audio-Preamplifier/ Control Unit



*Pure, fresh, clean sound*

**User Manual**

**Volume 1, Issue 2**

Audio electronic excellence for pure listening pleasure

AMPLABS. KEMPSEY, WORCESTER WR5 3NB

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Note: when available, there is a choice of 3 styles;

- Black to match the 'VOI' and 'Selector' knob style .....as shown on the front page
- Gold 'Guitar Style' tone and balance controls
- Silver 'Guitar Style' tone and balance controls..... the front panel has white lettering instead of gold

## • The Concept

In the early 60s and onwards through the decades, Audio companies in the UK produced sound systems that were, arguably, the best in the World. As decades passed, they proved to be archetypal designs, still revered today for their look and sound quality. Audio enthusiasts, across the world, still use these classic systems. We lovingly strive to keep them in servicable condition, despite their age. Unfortunately, after decades of use, the functionality and performance often falls short of what we once experienced and enjoyed.

The 'power amplifier' (PA) section of these systems has withstood the ravages of time better than the accompanying preamplifier/control unit, partly due to power amplifiers having fewer moving parts. Each amplifier has its own unique characteristic sonic quality. The flavours are many and varied. Some sound 'sweet', some have a 'warm' sound, some are neutral and some models sound 'clinical'.

A well designed audio system should not exhibit 'a characteristic sound'. It should just pass on the signal from the music source, to your speakers but in a more powerful form. The amplifier should sound 'neutral', like an 'amplifying wire'. Despite this, there is something special about the sound from vintage amplifiers.

Unfortunately the preamplifier/control unit (CU) section of these old systems, has not fared as well over the years, as the accompanying power amplifier. They contain numerous mechanical parts; obsolete switches, multi-ganged controls, obscure linkage systems, etc, etc. Servicing and upgrading these old units has become more and more difficult, as mechanical parts have become increasingly more difficult to source. More importantly, the electrical safety of some units falls far short of current electrical safety standards.

As mechanical parts wear beyond repair, the lack of a control unit means the PA is often stored away and forgotten or sold for a song! In view of this and from the many requests received over the years for a decent pre-amplifier, we came up with the 'Classic Accompaniment' AKA, the C6. A high performance, configurable, pre-amplifier/control-unit, specifically designed to accompany the classic power amplifiers and other peripherals to bring out their unique qualities to the full, hence the musical term.



## The C6 Control unit

The C6 provides high performance and functionality, linking modern and classic signal sources and amplifiers, while maintaining a classic handmade look and finish. Moving mechanical parts are limited to just the selector switch, on-off switch and four velvety smooth Alps RK27s. These are high quality, standard, easily obtainable parts, should they eventually require replacement. Like the classical counterpart, there is no remote control to tempt you towards the next era, but inside, the electronics incorporates state-of-the-art, ultra low noise, low distortion ICs and absolutely no thermionic valves that can veil the performance. This topology was purposely chosen to provide the purest possible signal quality to allow the characteristics of your favourite vintage power amplifier/speaker system, to shine through without added colouration, i.e, virtually acting like a passive system but with tone, balance and gain where needed.

As with most classic preamplifier/control units, the listener can nullify the effect of low volume listening and adjust for poor room acoustics and hearing deficiencies, by adjusting tone controls. The C6 is equipped with a high quality 'Baxandall' tone control system; arguably, an essential feature, often omitted, even in some top end systems. The C6 volume, balance and tone line up, proudly boasts a set of Alps 'Blue Velvet' pots. The Bass, Treble & Balance controls are centre detented to allow accurate setting of the 'flat' response & left & right, 'central' positions, respectively. The 'flat' position obviates the need for a tone 'in-out' switch. One less switch is always a good thing in any audio system, as noise and eventual failure, is always on the cards somewhere down the line.



The passive-equalised phono stage is purposely arranged as a two part system to allow a choice of moving magnet (mm) or moving coil (mc) operation. In preference to a mechanical or digital switch to select between mm and mc, it was decided to avoid switching these sensitive circuits altogether and incorporate the appropriate electronics for both mm and mc in the unit. The user decides which section is wired in (mm or mc). This

system also allows the sensitivities to be set accurately at the same time to match your cartridge. If in the future, after the warranty expires, you want to change the cartridge type, we will happily reconfigure the unit for you at a low nominal charge.

The bulk of the C6 electronics is incorporated on an industrial quality double-sided, glass-fibre, circuit board. Manufactured in classic, hand assembled 'through hole' technology. This method was chosen, in preference to modern 'surface mount' technology, to provide more user-friendly servcibility . For the best possible performance and longevity 1% metal film resistors, high tolerance foil capacitors and long life electrolytics are used throughout. The active elements, use super low noise, low distortion ICs with specifications and performances only dreamt of, a decade or so ago.



## INPUTS

Referring to the rear view image of the C6 above:

### Line 1 to Line 4

The C6 has six switched stereo inputs. 'Lines 1', to 'Line 4', are normal 'flat response' inputs of the same sensitivity. Line 1, & Line 2 each have a level control, allowing full variation of the signal source level. (This feature is ideal for matching high level sources to low level sources, helping to avoid sudden changes in volume when switching between sources).

## **OPTO**

The 'Opto' facility has two input sockets, one for a TOSLINK optical cable and the other, for a digital source via screened cable. Either one or the other socket can be used. Typical opto/digital sources include TVs, CD/Bluray players, DACs and PCs fitted with a TOSLINK optical output or digital phono cable output. This effectively provides a basic DAC facility for such sources. Note: On some versions, due to customer preferences, this input may just be a standard RCA input.

## **PHONO**

Phono input, selected via switch position 6, provides a low distortion, low noise, input for magnetic cartridges. This can be configured internally to suit most 'moving coil' or 'moving magnet' cartridges. It is initially set to the cartridge of your choice prior to purchase.

Note: In the event of ordering a C6, it is important to let us know what cartridge and other peripheral equipment you will be using, to gain full advantage of the C6's adaptability.

## **OUTPUTS**

### **Power amplifier connection**

The C6 has three pairs of outputs that connect to your power amplifier, labelled, 'high', 'medium', and 'low'. These are set internally to allow a wide variety of power amplifier sensitivities to be accommodated.

Example 1: Quad II amplifiers require 1.4V rms for full output whereas a Leak Stereo 20 requires just 220mV. The former would therefore be connected to the 'high' output pair, and the latter to the 'low' output pair.

Example 2: Quad 303, 405, requires 500mV rms for full output, therefore you would connect it to the 'medium' output pair.

### **Monitoring/recording output**

This pair of outputs is pre-volume and at 'line level\*'. This facilitates the monitoring or recording, of the selected source, even when the volume is turned off or at a low level.

# Specification of your C6

These are the actual sensitivities you chose for your C6 for your own reference: Yes, we actually print it here: Example below:

Line 1 & 2 variable (maximum sensitivity) & Line 3 & 4 : Approx 200mV rms for 1Vrms output on 'high' output, 500mV on 'medium' output and 250mV rms on 'low' output.

Phono input sensitivity: Moving Magnet 3.5mV for 1V rms output on the high output, 500mV on medium output and 250mV rms on low output.. Frequency response standard RIAA

Frequency response: Lines 1 to 4 : 6Hz to 60kHz. (-3db down points). Slewing rate set for legacy Quad power amps.

Tone Control response: Bass +/- 15dB @20Hz. Treble +/-15db @21kHz. Total Harmonic Distortion line 1 to 4: <0.005% @ 1kHz

## Typical Setup 2: Low/Medium output line input devices with 110uV MC phono input

**Line 1 to 4 maximum sensitivity:** 100mV rms for 1Vrms output on 'high' output, 500mV on medium output and 250mV rms on low output.

**Phono input sensitivity:** Moving coil 110uV for 1V rms output on the high output. Frequency response standard RIAA

**Frequency response:** Lines 1 to 4: 5Hz to 100kHz. (-3db down points)

**Tone Control response>** Bass +/-15dB @20Hz. Treble +/-15db @21kHz.**Total Harmonic Distortion line 1 to 4:** <0.005%

## Typical Setup 3: High output line input devices with MM phono input

**Line 1 to 4 maximum sensitivity:** 500mV rms for 1Vrms output on 'high' output, 500mV on medium output and 250mV rms on low output.

**Phono input sensitivity:** Moving magnet 2mV for 1V rms output on the high output. Frequency response standard RIAA

**Frequency response:** Lines 1 to 4 : 3Hz to 200kHz. (-3db down points). Set for modern high slewing rate power amplifiers.

**Tone Control response**> Bass +/- 15dB @20Hz. Treble +/-15db @21kHz. **Total Harmonic Distortion line 1 to 4:** <0.005%

## Typical Setup 4: low/Medium output line input devices with MM phono input

**Line 1 to 4 sensitivity:** 100mV rms for 1Vrms output on 'high' output, 500mV on medium output and 250mV rms on low output.

**Phono input sensitivity:** Moving magnet 5mV for 1V rms output on the high output. Frequency response standard RIAA

**Frequency response:** Lines 1 to 4: 3Hz to 100kHz. (-3db down points).

**Tone Control response**> Bass +/- 15dB @20Hz. Treble +/-15db @21kHz

**Total Harmonic Distortion line 1 to 4:** <0.005%

Note: The active devices used on the C6 are capable of extending to video frequencies. The upper frequency response of the C6 has been purposely designed to roll- off sensibly at not too low or too high a frequency, i.e. typically 60-100kHz. This provides a good slewing rate and improves the reproduction of high transient signals like symbols, triangles etc.