DRAWMER



CMC7
SURROUND MONITOR CONTROLLER

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ONE YEAR LIMITED WARRANTY

Drawmer Electronics Ltd., warrants the Drawmer **CMC7 Surround Monitor Controller** to conform substantially to the specifications of this manual for a period of one year from the original date of purchase when used in accordance with the specifications detailed in this manual. In the case of a valid warranty claim, your sole and exclusive remedy and Drawmer's entire liability under any theory of liability will be to, at Drawmer's discretion, repair or replace the product without charge, or, if not possible, to refund the purchase price to you. This warranty is not transferable. It applies only to the original purchaser of the product.

For warranty service please call your local Drawmer dealer. Alternatively call Drawmer Electronics Ltd. at +44 (0)1709 527574. Then ship the defective product, with transportation and insurance charges pre-paid, to Drawmer Electronics Ltd., Coleman Street, Parkgate, Rotherham, S62 6EL UK. Write the RA number in large letters in a prominent position on the shipping box. Enclose your name, address, telephone number, copy of the original sales invoice and a detailed description of the problem. Drawmer will not accept responsibility for loss or damage during transit.

This warranty is void if the product has been damaged by misuse, modification, unauthorised repair or installed with other equipment that proved to be faulty.

THIS WARRANTY IS IN LIEU OF ALL WARRANTIES, WHETHER ORAL OR WRITTEN, EXPRESSED, IMPLIED OR STATUTORY. DRAWMER MAKES NO OTHER WARRANTY EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. PURCHASER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE REPAIR OR REPLACEMENT AS SPECIFIED HEREIN.
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Some states and specific countries do not allow the exclusion of implied warranties or limitations on how long an implied warranty may last, so the above limitations may not apply to you. This warranty gives you specific legal rights. You may have additional rights that vary from state to state, and country to country.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off an on, then the user is encouraged to try to correct the interference by one or more of the following measures:

Re-orient or relocate the receiving antenna.

Increase the separation between the equipment and the receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Unauthorised changes or modification to this system can void the users' authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B limit.

For Canada

CLASS B NOTICE
This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASSE B AVIS
Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Règlement des signaux parasites par le ministère Canadien des Communications.

SAFETY CONSIDERATIONS

CAUTION - SERVICING
DO NOT OPEN. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING
TO REDUCE RISK OF FIRE/ELECTRIC SHOCK DO NOT EXPOSE THIS EQUIPMENT TO MOISTURE.

WARNING
DO NOT ATTEMPT TO CHANGE OR TAMPER WITH THE SUPPLIED MAINS CABLES.

WARNING
THERE ARE NO USER REPLACEABLE FUSES WITHIN EITHER THE CMC7 OR IT'S SUPPLIED POWER SUPPLY. IF FOR ANY REASON THE CMC7 CEASES TO WORK DO NOT ATTEMPT TO MEND IT - CONTACT DRAWMER TO ARRANGE FOR A REPAIR/REPLACEMENT.

In the interests of product development, Drawmer reserve the right to modify or improve specifications of this product at any time, without prior notice.

CMC7
Surround Monitor Controller

The CMC7 has been designed to simplify the control over you surround speaker setup whilst being pocket friendly, making surround recording feasible to the serious home producer and small studio. The CMC7 is a compact 8 channel / 7.1 / 5.1 surround volume controller and cost-effective alternative to the more complex and feature rich MC7.1. In order to maintain it's compact proportions and to keep the product budget friendly the CMC7 does away with controls that can often be found within your workstation software and concentrates on essential features such as ease of use and the quality of the signal path, ensuring that the audio is transparent and accurate across all channels and operation intuitive.



Whether it is producing audio for film or television, or transporting the listener directly into the venue of an all-encompassing orchestral piece, one thing is sure, the number of users that wish to listen to audio within a surround setting has been growing and will continue to do so. There has been an ever-increasing number of surround products coming to market, not only blue ray players and home cinema but also on mobile and media devices. For example, Apple devices have been capable of reproducing 7.1 surround since iOS 9.3. Therefore, it is likely that at some point every artist and engineer will consider trying surround sound, or fear being left behind. The budget friendly CMC7 allows you to do this without the large financial outlay that other setups will produce.



Accurate & Transparent

Coming from the same stable as the MC2.1, MC3.1 and MC7.1 you can be sure of the same high quality for the Drawmer CMC7 Surround Monitor Controller. The circuit is just as transparent and accurate. It's controls have the same quality feel and operation and the huge volume knob provides excellent channel matching, and smooth feel. You hear exactly what you've recorded!

Surround Sound

The 8 inputs and outputs are provided via two balanced 25 pin d-sub connectors wired to the Tascam standard making connecting easy. It allows for 8 independent channels, 5.1, 7.1, quadraphonic, DTS®, Dolby Digital EX,THX Surround EX™, DTS-HD™, Dolby Atmos®, etc, the setup is up to the user.

With the Stereo Mix switch active the surround mix can be bounced down to a 2.1 signal in the front left and right monitors and sub-woofer, to test the quality of the recording when in stereo. In addition, it has a professional quality stereo headphone output with a separate amplifier and level control, that provides private mix checking, a DIM switch reduces output by 20dB and a MUTE switch is also available to cut the output completely.

Precision

The circuit design of the CMC7 ensures that the channel matching of all 8 channels is consistent throughout the full range of the volume control. Other manufacturers of surround controllers use multi-ganged potentiometers to achieve the levels of the 8 channels, this is especially true of passive surround controllers, this simplifies the circuit but leads to discrepancies in the level of each channel, especially at the lower and upper volumes, where accurate channel matching can vary wildly.

Compact

The CMC7 packs a lot of features into a small package. With a footprint of just 18x16cm and a very low profile the CMC7 won't hog your desk space like some other controllers do. And if your on the move it's small enough to pop into a bag to take anywhere.

Tough & Secure

Whilst being smart and stylish the rugged, all steel enclosure will withstand the knocks and bumps of the studio, and, coupled with the high quality components used, the CMC7 is built to last. In addition, a Kensington security slot provides protection from thieves.



Can you trust the audio that your current monitor controller is providing? Is it colouring the sound? For all Drawmer monitor controllers it is imperative that what you record is exactly what you hear. There is one thing that should always be absolutely guaranteed - that you can rely on the accuracy of your monitor controller.



Main Features:

- Ultra low noise and transparent circuit design.
- All 8 inputs and outputs are via 2 Tascam standard 25 Pin D-Sub connectors making connection to interfaces and speakers simple and intuitive.
- Mix down switch enables you to check the Surround as a Stereo mix with an independent Sub switch controlling the LFE/Sub.
- Timed relay protection on all speaker outputs to prevent power up/down bangs.
- A large volume knob incorporating excellent channel matching and smooth feel.
- An independent Headphone Amplifier with Individual Level Control with jack on the rear.
- Kensington security slot (also called a K-Slot or Kensington lock).
- Very low profile desktop enclosure with a footprint of just 18x16cm.
- Stylish and Rugged Enclosure will withstand the knocks of the studio.

INSTALLATION

The CMC7 is a free standing, desktop unit. We have endeavoured to make the CMC7 as small as possible without compromising on controls, connections and above all sound quality. The unit has a footprint of just 18.7cm x 16.4cm with controls on the top, with headphone, input and output connections on the rear.

POWER CONNECTION

The CMC7 unit will be supplied with an external switching mode power supply that is capable of 100-240Vac continuous (90-264Vac max) and so should work globally. We strongly advise that the power supply that has been supplied with the CMC7 is used, rather than one with the equivalent ratings. In addition, should the power supply fail for any reason we strongly advise that you contact Drawmer for a replacement rather than repairing the unit yourselves. Failure to do either of these could permanently damage the CMC7 and will also invalidate the warranty.

The power supply can be fitted with 4 interchangeable AC pins for the UK, European, USA and Australian, though will be supplied with a type that is suitable for domestic power supply outlets in your country, the others are available upon request. For your own safety, it is important that you use the correct adapter. The power supply must not be tampered with or modified.

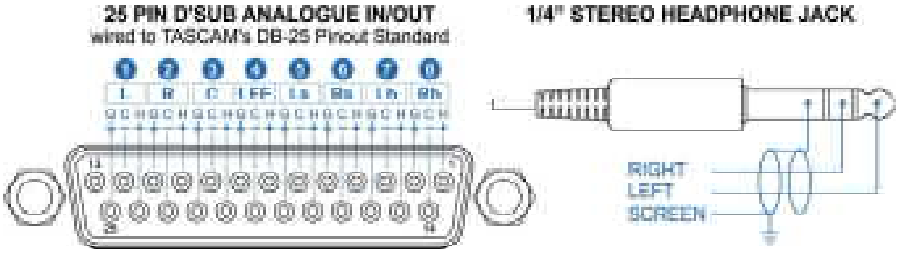
Before connecting the CMC7 to the power supply ensure that all knobs are turned off (i.e. fully anticlockwise). A switch next to the d.c. power inlet on the rear of the unit switches the power on/off.



SECURITY

To help protect the CMC7 from theft the side has a Kensington Security Slot (also called a K-Slot) which enables the fitting of hardware locking accessories that can attach your CMC7 to an immovable object, making the CMC7 more of a challenge for the potential thieves to steal.

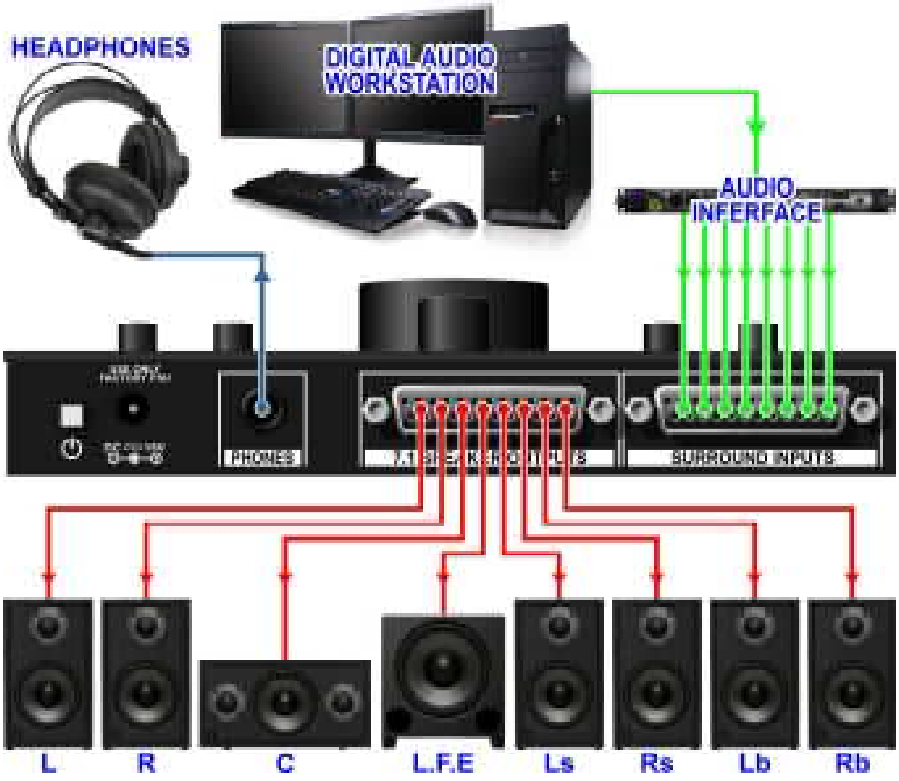
AUDIO CONNECTIONS



• **Interference:** If the unit is to be used where it maybe exposed to high levels of disturbance such as found close to a TV or radio transmitter, we advise that the unit is operated in a balanced configuration. The screens of the signal cables should be connected to the chassis connection on the XLR connector as opposed to connecting to pin1. The CMC7 conforms to the EMC standards.

• **Ground Loops:** If ground loop problems are encountered, never disconnect the mains earth, but instead, try disconnecting the signal screen on one end of each of the cables connecting the outputs of the CMC7 to the patchbay. If such measures are necessary, balanced operation is recommended.

TYPICAL CONNECTION GUIDE



CONTROL DESCRIPTION

The CMC7 allows the volume adjustment of 8 channels, either surround or otherwise, and with relatively few controls, enables you to perform the majority of mix checking tasks in you DAW or mixer, whilst remaining as transparent and precise as any other Drawmer monitor controllers.



(1) MASTER VOLUME

The Monitor Volume control adjusts the signal level of all 8 channels for all speaker outputs **(6)**. The Volume knob affects the volume of the monitors when in surround mode and also when the Stereo Mix **(3)** has been activated, and also has a bearing on the headphones **(1)**. The volume knob is large and accurate and provides excellent channel matching and a smooth feel, with a range from Off (-infinity) to +6dB of gain.

Because the circuitry is active it allows for the signal level to be increased, unlike attenuating only devices, making subtle problems within a mix (such as noise at low levels, or unwanted harmonics, for example) more obvious and easier to iron out, especially during musical passages that would normally be quiet.

WARNING:

It is recommended that you turn the volume control down to a lower level before turning the CMC7 off - this is to ensure that a sudden volume increase when turning on does not damage your speakers or your hearing.

In addition, do not use excessive force at either end of the volume knob - it's size would mean that damaging the potentiometer is possible.

2 OUTPUT

Mute: Cuts the volume of all channels (especially useful in an emergency). Note that **Mute** affects the headphones in the same way as it does the speakers.

Dim: With the switch active the output level is attenuated by 20dB's. It enables you to lower the volume without adjusting any of the settings.

3 STEREO MIX

Active: When active mixes down all eight channels to their relevant position within the stereo mix and outputs the signal via the Left and Right speakers and also the Sub signal to the LFE of the surround setup.

SUB: Toggles the Sub (LFE) on and off to hear the stereo mix through the L and R speakers only. Note that this switch only functions when the stereo mix is active.

4 HEADPHONE LEVEL

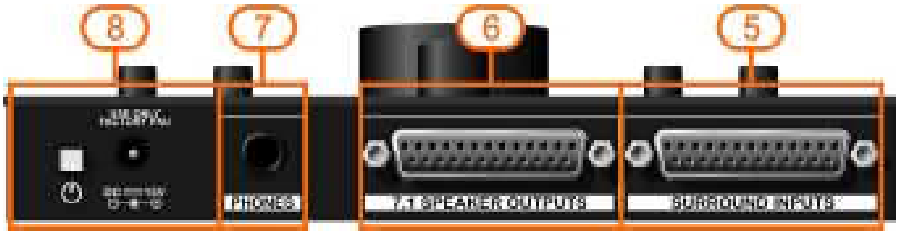
The CMC7 has a dedicated headphone output, via 1/4" TRS jack on the rear face **(7)**, with individual headphone amplifier and level trim **(4)** on the top face. The headphone operates in stereo, with all eight channels mixed down to their relevant position within the stereo mix.

Note that the headphone level control is a trim that works simultaneously with the Master Volume **(1)** to adjust the volume of the headphones so that this output can suit all types of headphones, from professional studio grade to consumer. It responds to Dim and Mute **(2)** in just the same way as the speaker outputs do.

The headphone output trim has no bearing on the volume of the main speaker outputs **(6)**, however, as the headphone amplifier is of such a high quality the headphone output could be used as a source for a second set of stereo monitors, should they be required, the trim control being used for speaker level matching.

Warning:

It is advisable to unplug the headphones before switching the CMC7 on or off. It is also recommended that you turn the headphone level down before inserting the jack, and turn it up to your desired listening level - these measures will not only prevent your ears from being damaged but also the headphone's drivers. Also, note that these are high quality circuits and have been designed for professional headphones, so care must be taken to lower the volume using the headphone level control when using lower standard, consumer quality headphones as damage could occur.



5 SURROUND INPUTS

The eight balanced inputs to the CMC7 are via a 25 pin D-Sub connector wired to the Tascam standard (Refer to 'Audio Connections' for wiring information). The CMC7 does not have input level trims, and their is only one volume control that effects all eight channels in exactly the same way regardless of the source origin, be it surround 7.1, 5.1 or 8 independent sources, meaning any individual channel volume level to balance the mix should be performed prior to reaching the CMC7.

6 7.1 SPEAKER OUTPUTS

The CMC7 has eight balanced outputs. Connection is via a 25 pin D-Sub connector wired to the Tascam standard (Refer to 'Audio Connections' for wiring information) and a 25 pin d-sub to 8x XLR snake should be used to connect each individual speaker. It has no speaker output trims so monitor calibration should take place after the CMC7 via active speaker adjustments.

7 PHONES

The headphone output is a 1/4" TRS jack that is capable of driving a wide number of headphones from budget to professional - The **Headphone Volume Level** knob for the headphone amplifier is found on the top panel above the main volume control **(4)**, and is used to trim the volume of the headphones.
Because the headphone amplifier is of such a high quality the headphone output could also be used as a source for a second set of stereo monitors, should they be required, the trim control being used for speaker level matching.

8 POWER

The CMC7 will be supplied with an external switching mode power supply that is capable of 100-240Vac continuous (90-264Vac max) and should work globally, but is supplied with a cable suitable for domestic power outlets in your country. We strongly advise that the power supply that has been supplied with the CMC7 is used, rather than one with the equivalent ratings. The push button switch activates the CMC7. Note that a timed relay protection circuit has been incorporated into circuit to prevent bangs and other potentially harmful artifacts from occurring during power up and power down.

Mix Checking Tips

Due to the versatility of the CMC7 some very useful techniques for checking your mix can easily be achieved, that can help improve the balance within a mix, pinpoint stereo width, phase and mono problems, and also aid when monogising.

The following are a few handy tips to help eradicate problems and bring about a balance within the mix:

Not too loud...

Give your ears a break. Do not have the volume too loud - frequent monitoring at anything above 90dB will only make your ears tired, meaning that you won't really hear the problems that may be occurring, and give you a false sense that the mix sounds nice and loud. Also, constant listening at anything above 100dB will probably have a long term detrimental effect on your hearing.

Shhhh...

Get into a habit of listening to your mix at very low levels quite often. Remember that not everyone listening to your song has music blasting out. As well as giving your ears a break, it will heighten problems in the mix - Do the key elements have a good balance, or are some instruments more prominent than they should be? If something is too quiet or loud adjust its volume or use E.Q. to fix it. If the mix sounds good at low levels it's likely that it will when loud.

Note that on the CMC7 it is better to lower the volume level using the DIM switch and then turn the volume up, rather than only turning the volume down, as you maintain greater control over the volume as well as better left/right channel matching.

Increase the Volume of Quiet Passages.

Because the CMC7 circuitry is active it allows for the signal level to be increased, rather than only attenuated, making subtle problems within the mix, such as noise at low levels, or unwanted harmonics, more obvious and easier to iron out, especially during passages that would normally be quiet.

Here, There and Everywhere.....

Listen to your mix on as many systems as possible. Try it on the high end studio system that you use for recording but also on a consumer quality systems too. In such conditions you may find that an instrument drops out of the mix, or another is too prominent, and adjustment to the mix need to be made.

Not so Sweet

Your mix may sound perfect when sat in the centre of the mix, but bare in mind that many people in the theatre or in front of their home entertainment system will not be sat in the 'sweet spot'. Move around the room - does the audio still have the same impact, do you notice audio dropping out, or that's too prominent. Make adjustments to the mix as you see fit.

Take two

Test your mix in stereo every once in a while. It's easy with the CMC7, just activate the 'Stereo Mix Active' switch. Remember the majority of users still listen in stereo so it's important that your mix sounds good in these situations. Adjust the mix as you see fit.

CMC7 GENERAL INFORMATION

IF A FAULT DEVELOPS

For warranty service please call Drawmer Electronics Ltd. or their nearest authorised service facility, giving full details of the difficulty. A list of all main dealers can be found on the Drawmer webpages. On receipt of this information, service or shipping instructions will be forwarded to you.

No equipment should be returned under the warranty without prior consent from Drawmer or their authorised representative.

For service claims under the warranty agreement a service Returns Authorisation (RA) number will be issued.
Write this RA number in large letters in a prominent position on the shipping box. Enclose your name, address, telephone number, copy of the original sales invoice and a detailed description of the problem.

Authorised returns should be prepaid and must be insured.

All Drawmer products are packaged in specially designed containers for protection. If the unit is to be returned, the original container must be used. If this container is not available, then the equipment should be packaged in substantial shock-proof material, capable of withstanding the handling for the transit.

CONTACTING *DRAWMER*

We will be pleased to answer all application questions to enhance your usage of Drawmer equipment.

Please address correspondence to:

DRAWMER Electronics LTD
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S62 6EL
United Kingdom

Telephone: **+44 (0) 1709 527574**
Fax: **+44 (0) 1709 526871**

Contact via E-mail: **tech@drawmer.com**

Further information on all Drawmer products, dealers, Authorised service departments and other contact information can be found on our website: **www.drawmer.com**

SPECIFICATION

CROSSTALK >80dB

THD & NOISE 0.01% @ 0dBu

FREQUENCY RESPONSE
20Hz-20kHz +/- 0.2dB

PHASE RESPONSE
20Hz-20kHz +/- 2degrees max

POWER REQUIREMENTS
External Power Supply
Input: 100-240V ~ 50-60Hz, 0.48A MAX.
Output: 15V ⎓ 1A
Voltage automatically selected by PSU

EMC Standards EN55022:2006+A1:2007 / EN6100-3-2 / EN6100-3-3

Use only the external PSU supplied by Drawmer or an accredited partner. Failure to do so could permanently damage the CMC7 and will also invalidate the warranty.

CASE SIZE

Depth	168mm
Width	187mm
Height	45mm

WEIGHT 1.1kg

Ref:1v01D 08-02-19