Clockaudio

ARM 100 / 102 / -C MK2

Instructions

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Thank you for purchasing a Clockaudio product. We are confident that this product will give you many years of trouble free operation.

As part of Clockaudio's continual ongoing programme of product development, improvements to the existing ARM microphone range including the ARM-C controller have been made to further increase the already excellent reliability.

IMPORTANT INFORMATION

It is important not to connect the ARM V2 microphone to an existing ARM-C controller or an existing ARM microphone to an ARM-C MK2 controller. It will not work.
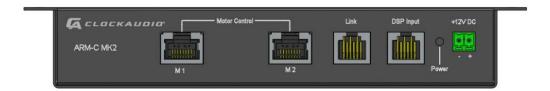
The ARM V2 microphones can only be connected with ARM-C MK2 controllers.

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1. ARM-C Control Unit Overview

The ARM-C controller allows a DSP to instruct up to 4 ARM microphones to be raised or lowered. Up to four units can be daisy chained (using the Link to DSP input connection). Thus allowing a DSP using a single control line to raise/lower up to 16 ARM microphones.

- Supports 2 x RJ12 ports; one for DSP Input and one for Link which can be used to connect to another ARM-C's DSP Input. A single command from a DSP will simultaneously activate all connected ARM motorised microphones.

- Supports 4 x RJ45 ports (M1 – M4) that allow for fast and easy connection of 4 x ARM motorized microphones. M1 and M2 on the front of the unit while M3 and M4 are on the rear of the unit.

- A positive (+2.5V to +12V) signal applied at the DSP Input port will simultaneously activate all ARM motorised microphones connected to the control unit's M1 – M4 motor outlet ports.

- Logic input to the DSP Input port shall be on pin 2 (Live); pin 1 is Gnd.

- Removable Phoenix connector provides connection to an external 12V DC 2A supply (ARM-PSU 1).

- LED power indicator.

- Flanges on the unit provide a simple screw fixing of ARM-C controller.

> **Warning**: Under no circumstances must any equipment other than ARM V2 microphones be connected to any of the M1 – M4 sockets of the ARM-C MK2 controller unit. Serious damage will occur to equipment and/or controller unit which is not covered under warranty.
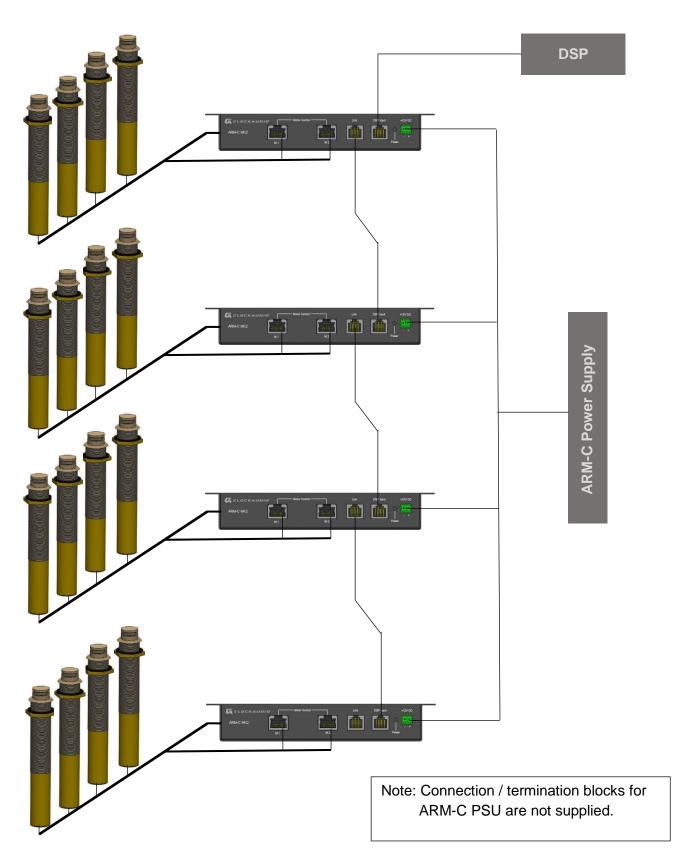
2. Installation

1. Install the ARM motorised microphone as per separate instructions given with the product.

2. Ensure that the Control unit power supply is **NOT** switched on until all wiring and connections have been completed.

3. Connect the ARM motorised microphone(s) to any of the M1 – M4 motor outlet ports on the Control unit. It does not matter which port is used as they are all connected in parallel.

4. Connect the DSP logic signal output terminals to the DSP input socket on the ARM-C controller. Use the Link port for daisy chaining the connection to another ARM-C controllers.

5. Connect the microphone audio output cable to the mixer / DSP.

6. Power up the DSP and check that it has been programmed to supply +2.5V to 12C logic high to ARM-C to raise the microphone.

7. The DSP should be programmed to mute the microphones whilst in the upward or downward transition to prevent unwanted motor noise pickup. Typical transition time is approximately 3 second.

8. Connect the 12V DC power supply to the DC +/- input terminals of the Controller unit observing the correct polarity

> **Warning**: Warning under no circumstances connect or disconnect an ARM microphone with the ARM C unit powered up. Failure to do so may cause erratic operation.
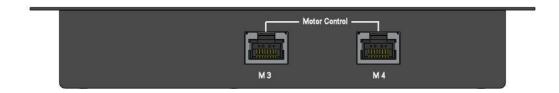
9. Switching on the DC supply to the ARM-C controller will illuminate the coloured LED on the ARM-C. The motorised microphone may initially very slowly fully extend and then retract. This is normal as it will be auto-calibrating.

10. When a logic high is received from a DSP, the microphone will raise and remain raised until a logic low is received.

3. Connecting Multiple ARM-C Controllers

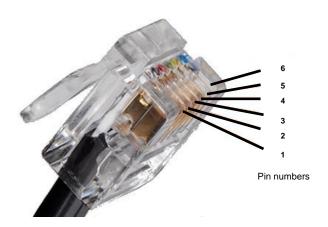Note: Connection / termination blocks for ARM-C PSU are not supplied.

4. Rear Panel

While the front of the unit provides DSP, Link, M1, M2 and power connections, the rear panel provides connection for M3 and M4. The four ARM microphones can be connected to any of the four connectors.

5. Pinouts for RJ12 DSP/Cable

Off the shelf, readymade cables are freely available on the high street electrical retail outlets. However if a cables are required to be handmade, then on the DSP input for the ARM-C, pin 2 shall be used to provide the active signal (Live) while pin 1 provides the ground connection. None of the other pins are used.

Pin numbers

6. Troubleshooting Guide

Microphone does not move up or down	- Check that the DSP control signal is present logic +2.5 to 12 Volts is required. - Is the microphone motor cable connected? - Is the DC supply to the Controller unit switched on blue power light should be illuminating? - Check logic input cable connections between DSP and DSP control ports on the controller unit. - Disconnect and reconnect the power supply to the controller unit.
Microphone is picking up noise as it is being raised or lowered.	This is normal. The microphone must be muted by the DSP during the raising / lowering transitions. Note it takes 3 seconds for the microphone to raise / lower.

7. Specifications

7.1.   ARM 100 and ARM 102N

	ARM 100	ARM 102N
Polar Pattern	Omni-Directional	Cardioid
Capsule type	Condenser	
Audio cable length	2m (6.6ft)	
Control cable length	2m (6.6ft)	
Phantom power	Integral, requires 9 – 48VDC	
RF filters	Included (eliminates GSM frequencies from 800 – 1200 MHz)	
Impedance	200 Ohms	
Frequency response	30 Hz to 20 KHz	
Sensitivity	-42.5dB ± 3dB @ 1KHz (0dB =1V/Pa).	
Total harmonic distortion (THD)	>1% at an operating level of 120dB	
Lengths	180mm – overall 21mm – above table when extended 3mm – above table when retracted	
Diameter	30mm	

7.2.   ARM-C Controller

- Digital four channel motor control unit for use with the ARM series of motorized Boundary layer microphones.
- Requires a single logic command (+2.5 to +12V) from a DSP or Electronic Switching Unit to raise or lower all ARM microphones simultaneously.
- Expandable to up to 4 units.
- Power requirements external 12VDC (not supplied).
- Strong sheet steel construction.
- Power LED indicator Blue.
- Connectors:
    - 2 x RJ12 for DSP and Linking to another ARM-C control unit.
    - 4 x RJ45 M1-M4 motor control ports for 4 x ARM microphones.
    - 1 x 2-way phoenix connector for +12V DC input
- Size : W 198 H 42 D 85mm

8. Product Warranty

This product is offered with a 1 year warranty from the date of purchase. Any defect that arises due to faulty materials or workmanship will either be replaced, or repaired free of charge by the agent from whom you purchased the unit. Please note charges will be incurred on any products returned for service / repair not in warranty or has been subject to customer abuse or incorrect wiring.

The warranty is subject to the following provisions:

- The warranty does not cover accidental damage, misuse, cabinet parts, knobs, batteries or consumable items. Any product returned to Clockaudio failing to meet the terms listed will incur a repair and postage charge.
- The product must be correctly installed and operated in accordance with the instructions supplied with the product.
- Unauthorised modifications and alterations to the original specifications will render the warranty void
- The product must be used for the sole purpose that it was designed for.
- The warranty given is strictly with the original owner and becomes invalid if the product is resold or becomes damaged by inexpert repair.
- Product purchased outside of the countries served by Clockaudio designated / approved Agents are not covered by the warranty.
- Specifications / improvements are subject to change without notice.
- Clockaudio disclaims any liability for incidental or consequential damages.
- The warranty is in addition to and does not diminish your statutory legal rights.

9. Disposal of Unit

At the end of the life of this equipment, dispose of equipment according to local regulations

For more information and advice on Clockaudio products please look on Clockaudio website: www.clockaudio.com

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