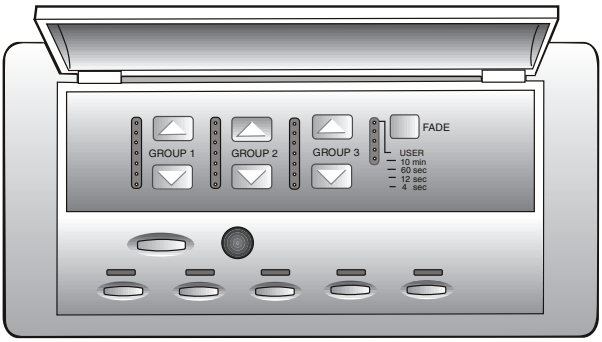
CLIPSAL

CLIPSAL C-Bus Energy Management System

C-Bus Scene Master

Installation Instructions

5035NIRS



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Product Range

5035NIRS C-Bus Scene Master with Infrared Remote Control (includes one 5035TX)

5035TX C-Bus Scene Master Hand Held Infrared Remote Control (spare/replacement part)

Description

The Scene Master is a powerful C-Bus Scene Controller with Infrared Remote Control capabilities.

Scene Master is capable of storing up to five pre-programmed scenes (switching/ dimming patterns), plus a Master Off Scene. Simply press a scene button to recall the preferred lighting pattern to suit your mood or activity!

In total, up to 33 Control Zones (C-Bus Group Addresses) may be individually controlled by each Scene Master (9 Zones per Scene).

Multiple units may be interconnected on a C-Bus network for independent operation. Multiple units may also be linked, allowing common scenes to be triggered from any location. Scenes may also be cascaded or concatenated across multiple units, allowing very complex scenes to be created.

Scene Master may be configured using a personal computer running C-Bus Installation Software v2.1.2 (or higher). Limited programming support is also offered from the front panel of the unit, allowing the end user to customise and create new scenes, and vary preset lighting brightness, fade rates and master switching functions without the use of a computer. Please refer to the Scene Master User's Guide for further information.

Capabilities

Scene Master supports the following features:

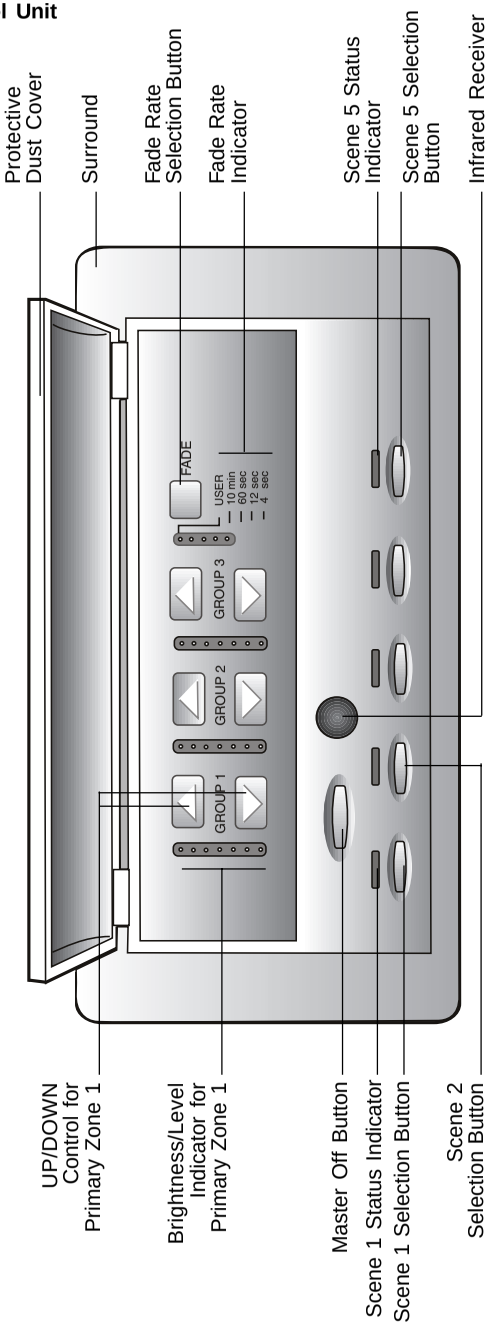
- 33 Control Zones
- 5 Preset Scenes
- Master Off Function
- Infrared Remote Control
- Scene and Zone Level Indicators, with Low light Fallback and Nightlight Modes
- Fully Adjustable Fade Rates for each Zone
- End User Programming Support (Setup Mode)
- Scene Linking (synchronisation, concatenation)
- Remote Scene Triggering via C-Bus
- Built-in C-Bus System Clock
- Loop-In / Loop-Out Removable C-Bus Terminals
- Universal Mounting Bracket for Easy Installation
- Protective Dust Cover

Definitions

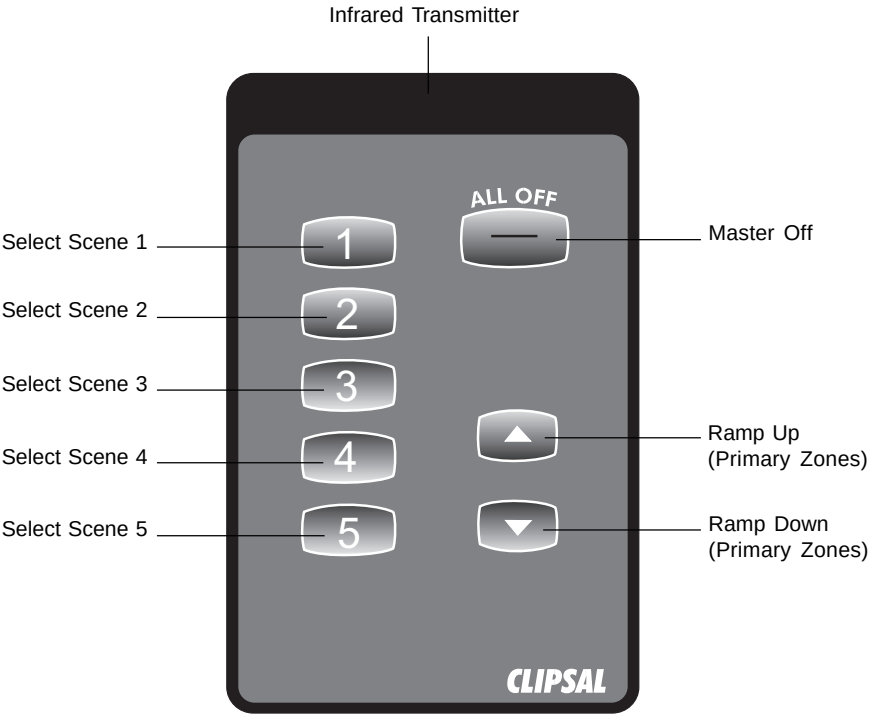
Term	Definition
Scene	A Scene is defined as the combination of lights distributed by various light Zones with different light levels. It can be preset, stored in and recalled by one of the five scene buttons on the Scene Master front panel.
Zone	Refers to an illuminated area. In Scene Master, a Zone is a C-Bus Group Address representing one or many lighting or other electrical loads connected to a C-Bus Output Unit (such as a dimmer unit).
Primary Zone	First three Zones common to all Scenes. Primary Zone brightness levels are adjustable from the panel of the Scene Master unit using the UP/DOWN Dimming Buttons.
Secondary Zone	Six additional Zones individually controllable for each Scene.
Fade Rate	Period of time over which the load is ramped to the desired brightness level.

Quick Reference Guide

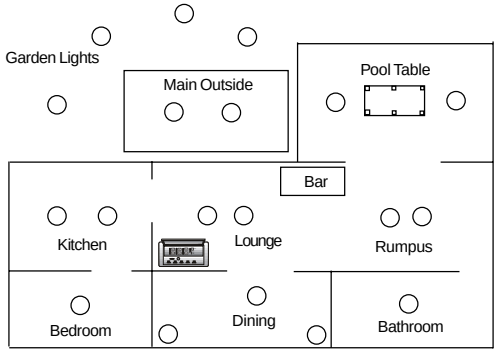
Scene Master Control Unit

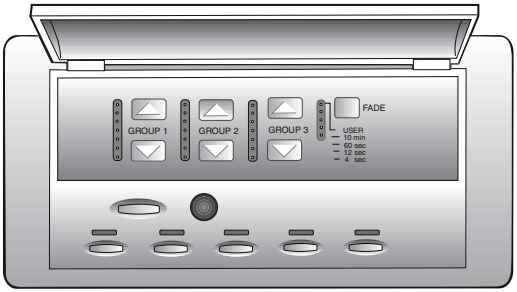


Infrared Remote Control



Example Scene Master Configuration





			SCENE 1	SCENE 2	SCENE 3	SCENE 4	SCENE 5
			Welcome Home	Entertainment	Movie Mode	Outdoor Mode	Games
Primary Zones	Zone 1	Main Dining Area	90%	30%	10%	10%	10%
	Zone 2	Dining Mood Lights	10%	90%	0%	10%	0%
	Zone 3	Main Lounge Area	90%	10%	60%	10%	10%
Secondary Zones	Zone 4	Lounge Mood Lights	10%	90%	30%	10%	0%
	Zone 5	Main Rumpus Area	90%	10%	10%	80%	10%
	Zone 6	Rumpus Pool Table	0%	10%	0%	0%	99%
	Zone 7	Bar Down Lights	0%	10%	10%	90%	90%
	Zone 8	Main Outside Area	0%	0%	0%	10%	10%
	Zone 9	Garden Mood Lights	0%	10%	0%	90%	50%

Note: Secondary Zones, Target Illumination Levels and their corresponding Fade Rates can be different for each Scene.

Installation Procedure

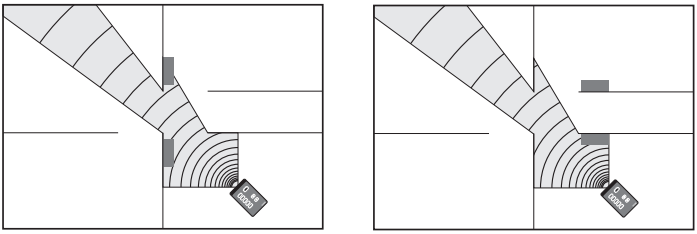
Installation Location

It is important to select the right place to install C-Bus Scene Master. Some considerations are listed below:

- Provide easy access to unit for creating and selecting scenes.
- Avoid obstructions to receiving infrared signals from the Remote Control unit.
- Keep Scene Master clear of places subject to water, humidity, direct sunlight or heavy dust.
- Allow adequate ventilation. Do not cover unit.
- Scene Master is designed for indoor use only.

Installing Multiple Scene Master Controllers

Multiple Scene Master units can be installed on any C-Bus Network. These units may be programmed to operate dependently or independently of each other. Care must be taken not to overlap infrared reception zones for each unit, else both units may trigger a scene, with unpredictable results.



Universal Mounting Bracket (UMB)

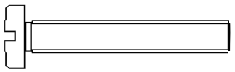
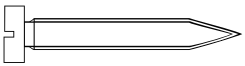
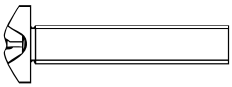
The C-Bus Scene Master is supplied with a Universal Mounting Bracket (UMB), which allows the unit to be easily mounted into new or existing installations. The UMB has been designed with maximum flexibility in mind, allowing the mounting of the Scene Controller to most international standard wall boxes as well as the Clipsal range of wall mounting brackets.

Mounting Screws

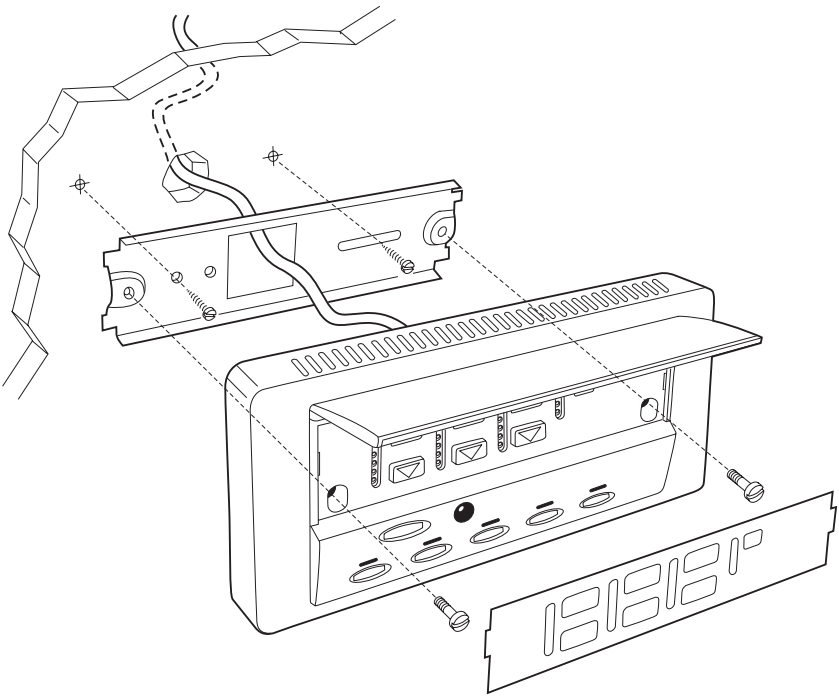
Two screws are required to fix the Universal Mounting Bracket to the wall. If fixing the UMB directly onto the wall, use ordinary self tapping screws, or screw and wall plug combination. If mounting using Clipsal mounting accessories such as a wall box or mounting bracket, use the screws provided with your Scene Master.

Three sets of different screws are provided with the Scene Master Unit. Each is suited to different international standard Clipsal mounting accessory screw sizes.

Please use the screws applicable to your region.

Screw Type	Description	Where To Find
	**UK Screw** STEEL SCREW. M3.5 x 0.6 x 25. PAN HEAD COMBINATION, ZINC PLATED	Shipped with gridplate assembly. Remove Scene Master Surround to access UK Screws.
	**Australian Screw** STEEL SCREW. M3.5 x 0.8 x 32. PHILLIPS COMBINATION, CHEESE HEAD, ZINC PLATED CLEAR	Supplied in Parts Pack.
	**South African Screw** STEEL SCREW. M4 x 26.3. PAN HEAD COMBINATION, ZINC PLATED	Supplied in Parts Pack.

Assembly Diagram



Mounting the Unit

Existing Installation, where the Scene Controller replaces a Key Input Unit.

Mounting Scene Master to the wall using Universal Mounting Bracket (UMB)

1. Remove Key Input Unit
2. Mark location of mounting holes using UMB as a template
3. Ensure there is sufficient space for terminal block to protrude into wall
4. Drill and plug mounting holes
5. Fix UMB to wall
6. Terminate C-Bus cabling as described in section titled “Wiring Details”
7. To gain access to Scene Master mounting holes, remove plastic label insert (located under Scene Master front cover)
8. Fix Scene Master to UMB using the screws provided
9. Replace plastic label insert.

Mounting Scene Controller using an existing wall box

1. Remove Key Input Unit
2. Fix UMB to wall box (screws supplied)
3. Terminate C-Bus cabling as described in section titled “Wiring Details”
4. To gain access to Scene Master mounting holes, remove plastic label insert (located under Scene Master front cover)
5. Fix Scene Master to UMB using the screws provided
6. Replace plastic label insert.

New Installation

Mounting Scene Master directly to wall using Universal Mounting Bracket (UMB)

1. Determine mounting position for Scene Master
2. Mark fixing holes and cable entry hole using UMB as a template (cable entry requires a minimum hole size of 28mm diameter.)
3. Drill fixing holes and insert wall plugs or similar
4. Fix UMB to wall
5. Terminate C-Bus cabling as described in section titled “Wiring Details”
6. To gain access to Scene Master mounting holes, remove plastic label insert (located under Scene Master front cover)
7. Fix Scene Master to UMB using the screws provided
8. Replace plastic label insert.

Mounting Scene Master using a wall box

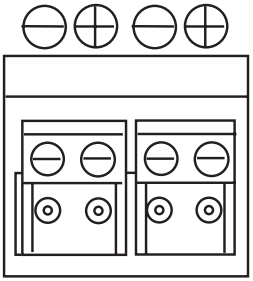
1. Determine mounting position for Scene Master
2. Mount wall box in accordance with regulatory standards
3. Fix UMB to wall box
4. Terminate C-Bus cabling as described in section titled “Wiring Details”
5. To gain access to Scene Master mounting holes, remove plastic label insert (located under Scene Master front cover)
6. Fix Scene Master to UMB using the screws provided
7. Replace plastic label insert.

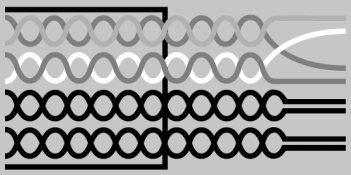
Wiring Details

C-Bus Network Connection

Installation of the Scene Master on the C-Bus Network requires connection to the unshielded twisted pair C-Bus Network Cable. Connection should be made using Category 5 data cable, Catalogue Number 5005C305B.

The C-Bus Network Connection is polarity sensitive, and is clearly marked on the rear of the Scene Master unit. Two loop-in / loop-out, removable terminal blocks are provided for easy installation and maintenance.





Blue + Orange, C-Bus (+)

Blue/White + Orange/White, C-Bus Neg (-)

Brown + Brown/White, Remote OFF

Green + Green/White, Remote ON

RJ Pin	C-Bus Connection	Colour	Scene Master
1	Remote ON	Green/White	Not Connected
2	Remote ON	Green	Not Connected
3	C-Bus Neg (-)	Orange/White	C-Bus Neg (-)
4	C-Bus Pos (+)	Blue	C-Bus Pos (+)
5	C-Bus Neg (-)	Blue/White	C-Bus Neg (-)
6	C-Bus Pos (+)	Orange	C-Bus Pos (+)
7	Remote OFF	Brown/White	Not Connected
8	Remote OFF	Brown	Not Connected

Note: The RJ Pin layout is not relevant to Scene Master, unless C-Bus units are interconnected using C-Bus Category 5 patch cord, Clipsal Catalogue Number RJ5A8/CBPL.

C-Bus System Clock

The Scene Master Control Unit incorporates a software selectable C-Bus System Clock used for synchronising data communications waveforms on the C-Bus Network. No more than three units on any C-Bus Network should have active Clock circuitry, so this option would normally be disabled using the C-Bus Installation Software.

C-Bus Power Requirements

The C-Bus Scene Master Unit draws 36mA from the C-Bus Network. Adequate C-Bus Power Supply Units must be installed to support the connected devices. If in doubt, consult the C-Bus Calculator – Network Design Verification Software Utility.

Power-Up Load Status

All C-Bus units have onboard non-volatile memory which is used to store the operating state of the unit in case of a C-Bus power loss. The Scene Master will store the current output status of all Primary Zones (Group Addresses) only, and these levels may be re-instated upon power restoration if required. Secondary Zone (Group Address) levels may be stored using the appropriate C-Bus Output Unit configuration options.

Scene Master does not store the Scene Status, however if a preset scene switching pattern happens to be established at power up, then Scene Master will recognise this and indicate the active scene as required. Please refer to the C-Bus Manual for information relating to C-Bus Power Fail Recovery Options.

Power Surges and Short Circuit Conditions

The mains voltage must be limited to the range specified for any C-Bus unit which is mains powered. Each unit incorporates transient protection circuitry, however external power surge protection devices should be used to enhance system immunity to power surges. It is strongly recommended that overvoltage equipment such as the Clipsal 970 is installed at the switchboard.

Megger Testing

Megger testing of an electrical installation that has C-Bus units connected will not cause any damage to C-Bus units. Since C-Bus units contain electronic components, the installer should interpret megger readings with due regard to the nature of the circuit connection.

Megger testing must never be performed on the C-Bus data cabling or terminals as it may degrade the performance of the network.

Important Notes

- An Electrician's Licence is not required to install Scene Master.
- Do not connect mains to Scene Master unit.

Programming Requirements

The Scene Master Control unit must be programmed to set a unique identification (Unit Address) and the mode of operation on the C-Bus Network. The C-Bus Installation Software can be used to configure all operational parameters including:

ESSENTIAL FOR CORRECT OPERATION ✪ FULL FEATURE SUPPORT ● LIMITED FEATURE SUPPORT ①	C-Bus Installation Software v2.1.2	Scene Master Control Panel	Infrared Remote Control
Initialise Unit for use on C-Bus Network (Unit Address)	✪		
Configure Primary Zones (Group Addresses)	✪		
Configure Secondary Zones (Group Addresses)	●	①	
Select Scenes	●	●	●
Master Off	●	●	●
Dim Primary Zones	●	②	③
Create and Edit Scenes	●	●	
Set Zone Fade Rates for Each Scene	●	●	
Configure Master Switching Functions	●	④	
Enable Infrared Remote Control Operation	●		
Set Nightlight Options	●		
Set C-Bus Clock Generator Status	●		
Set Fallback Options	●		
Link Multiple Scene Master Units for Synchronous Scene Selection	●		
Configure C-Bus Switch Plates for Remote Scene Activation	●		

① Secondary Zones may be configured for use in scenes provided that a separate C-Bus Input Unit controlling that Zone has been set up by installer, and provided allocation space is available (maximum 6 Secondary Zones per Scene).

② Individual Dim Control for each of the three Primary Zones is available using the UP/DOWN Buttons located on the front of the Scene Master Unit.

③ The Infrared Remote UP/DOWN Buttons dim all three Primary Zones simultaneously. Individual Zone Dimming is not available from the Remote.

④ The Master Off Fade Rate can be altered from the front panel of the Scene Master Unit. Zones associated with the Master Off function must be set using C-Bus Software.

C-Bus Service Pack v2.1.2

The Scene Master must be programmed using 5000S/2 C-Bus Installation Software v2.1.2 (or higher). C-Bus Service Pack v2.1.2 is a software plug-in, designed to upgrade your existing C-Bus Installation Software v2.0 to the current build standard. Many new features and enhancements are added, including programming support for the latest release C-Bus products, and Scene Master.

C-Bus Service Pack v2.1.2 is provided on CD-ROM with the Scene Master Unit. To install the software, simply insert the CD into the CD Drive and follow the on-screen prompts.

The CD-ROM also contains Online Documentation. Please refer to the C-Bus Scene Master Programming Reference (C-Bus Manual Addendum V212) for further information relating to the programming of Scene Master units.

Important Warning

The use of any non C-Bus Software in conjunction with the hardware installation without the written consent of Clipsal Integrated Systems may void any warranties applicable to the hardware.

Unit Operation

The many powerful features of Scene Master are fully described in the Scene Master User's Guide. Topics covered include:

- Scene Selection
- Dimming Controls
- Using the Remote Control
- Customising Scenes (Setup Mode)

Please consult that document for further details on the operation of your Scene Master Unit.

Electrical Specifications

5035NIRS Scene Master Control Unit

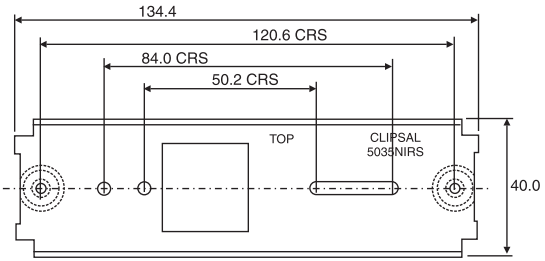
Catalogue Number	5035NIRS
C-Bus Supply Voltage	15-36V DC @ 36mA required for normal operation. Does not source current to the C-Bus network.
AC Input Impedance	50kΩ @ 1kHz
Electrical Isolation	3.75kV RMS. from C-Bus to mains (provided external to 5035NIRS)
Control Functions	5 Preset Scenes Master Off Function Multi-Zone Up/Down Dim Functions Programmable Zone Fade Rates
Maximum Number of Control Zones	33 Control Zones (Group Addresses)
Status Indicators	**Primary Zone Level Indicators** 3 x 7 LED BAR GRAPH – Colour Orange **Scene Status** x 5 – Colour Orange **Fallback Mode Option** Software Programmable low intensity LED illumination setting **Night Light Option** Allows permanent Scene Status LED illumination at low brightness level
Maximum Number of Units on a single C-Bus Network	50
Switch Operations	>100K operations
Warm Up Time	3 seconds
Network Clock	Software selectable
C-Bus Connection	2 x Loop-in / Loop-out Removable Terminal Blocks provided 0.2 – 1.5mm^2 (24-16AWG)
Dimensions	175 x 88 x 23.3mm (LxWxD)
Weight	220g
Colour	White
Operating Temperature Range	0 – 45ºC
Operating Humidity Range	10 – 95% RH

5035TX Infrared Remote Control

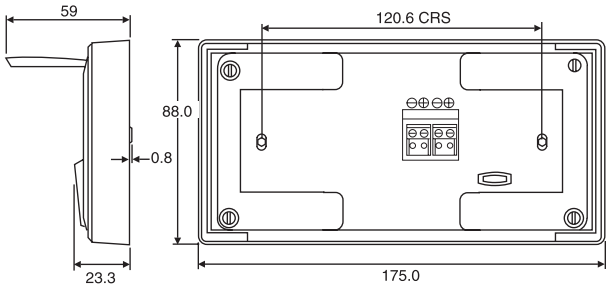
Catalogue Number	5035TX
Supply Voltage	3V DC required for normal operation. Transmission range reduces with battery voltage.
Battery	Lithium Coin Battery CR2025 (or equivalent)
Battery Shelf Life	Approximately 1 Year
Infrared Transmission Range	≤ 15m at 90° to Scene Master Control Unit
Infrared Transmission Protocol	Standard NEC IR Code Compatible
Control Functions	8 Membrane Buttons 5 Preset Scene Buttons Master Off Button Multi-Zone Up/Down Dim Buttons
Dimensions	86 x 54 x 8mm (LxWxD)
Weight	28g
Colour	Black

Mechanical Specifications

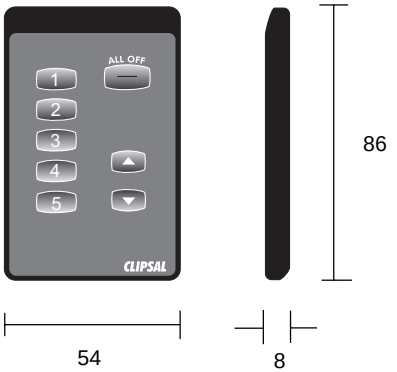
Universal Mounting Bracket (UMB)



Scene Master Control Unit



Infrared Remote Control



All dimensions are in millimetres.

No user serviceable parts inside.

Standards Complied

Standard	Title
AS/NZS 3100:1997	General Requirements for Electrical Equipment
AS/NZS 3260:1993	Approval and test specification – Safety of information technology and business equipment
AS/NZS 1044:1995 IEC/CISPR 14:1993 BS/EN 55014: 1994	RFI Emissions Standard
BS/EN 61000-4-2	Immunity to Electrostatic Discharge
BS/EN 61000-4-3	Immunity to Radio Frequency Interference
BS/EN 61000-4-4	Immunity to Electrical Fast Transients
BS/EN 61000-4-5	Immunity to Surge Voltages
BS/EN 61000-4-11	Immunity to Voltage Dips and Interruptions
89/336/EEC	Electromagnetic Compatibility Directive

Limited Warranty

The Scene Master product carries a two year warranty against manufacturing defects (refer to Warranty Statement), with the following exclusions:

Item	Applicable Warranty
Infrared Remote Control Battery	Limited 30 Day Warranty on Battery Condition as Supplied
C-Bus Service Pack v2.1.2	Limited 90 Day Warranty on Software Media Only

Further Information

For further information about programming and configuring Scene Master, please consult the documentation supplied:

- **Scene Master Installation Instructions**
  The printed booklet you are reading now contains detailed information for the installer regarding unit mounting, wiring, and C-Bus network requirements. Scene Master features and specifications are also presented.

- **Scene Master User's Guide**
  Printed booklet supplied with Scene Master, to be left on-site for the customer. It contains information about Scene Master operation, general care and use instructions. The User's Guide also contains information about Setup Mode, which allows the end user to alter scene settings without the use of a computer.

- **Scene Master Programming Reference (C-Bus Manual Addendum V212)**
  The Scene Master Programming Reference is provided on CD in electronic format (Portable Document File (PDF), and requires Adobe Acrobat Reader v4.0 or higher to view or print). It presents a comprehensive guide to programming requirements and advanced configuration capabilities of Scene Master.

Technical Support and Troubleshooting

For further assistance in using C-Bus Scene Master, please consult your nearest Clipsal Integrated Systems Sales Representative or Technical Support Officer.

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Clipsal Integrated Systems' Website

Please visit the Clipsal Integrated Systems' Website for information on new product developments, online software registration, software upgrades, plus much more.

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