



Anytronics IR Anyscene Two : Installation Guide

The Anytronics IR Anyscene Two provides 56 programmable DMX scenes of 128 channels, in a compact and user friendly form suitable for use in architectural applications. The IR Anyscene Two fits in a standard wall mounting UK single patress box. An alternative version of this product provides 28 programmable scenes of 256 channels.

Several AnyScene Two controllers can be used in a single DMX system. They will automatically pass control of the system from one to the other as scenes are recalled. This is useful for providing lighting control from several locations, and these IR controlled units can be combined with push button AnyScene products in the same lighting system.

The Anyscene Two is normally powered remotely from +5 Volts supplied via a Category 5 cable with RJ45 connector (as supplied) which also carries the DMX signals to and from the unit. This connection is most simply accomplished by connecting the RJ45 cable (supplied) to the memory port provided on an Anycolour DMX to DFB interface or on a suitable Anytronics Dimming Pack, or to a power supply PCB with DMX connections that Anytronics can supply.

Installation procedure overview

1. Use supplied RJ45 cable to connect to +5 Volt supply and DMX data line.
(If being used with Anycolour DMX to DFB Interface, or Anytronics dimming pack, connect to RJ45 DMX port connector)
2. Set DMX addressing on any DMX light fittings, dimmers or other DMX equipment to appropriate addresses in the range 1-128.

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IR Anyscene Two : USER GUIDE

1.0 Overview

The Anyscene Two front panel has four LED indicators. A green power LED shows when the unit is powered and a yellow data LED indicates that the unit is receiving programming data from a DMX source. The blue IR LED flashes when a command from the remote control is being actioned, and the red LED lights during recording or playback of a sequence of scenes.

The rear of the panel contains an eight way DIL switch for selecting various optional operational features which are outlined below.

Switch	OFF	ON
1	Normal operation	Clear all scenes and sequences
2	Memory unprotected	Memory Protected
3	Access scene memories 1-28	Access scene memories 29-56
4	Master level adjust	Scene period adjust
5	Fade Time x 1	Fade Time x 2
6	Fade Time x 1	Fade Time x 4
7	-	-
8	-	DMX Terminator

Note switches 5 & 6 combine to select the Fade time as follows :-

DIL Sw 6	DIL Sw 5	Fade Time (sec)
OFF	OFF	2.5
OFF	ON	5
ON	OFF	10
ON	ON	20

2.0 Operation

The Anytronics AnyScene Two records static DMX scenes consisting of DMX channels 1-128 and will recall these scenes when commanded by the remote control. The remote control has 28 buttons labelled 1-28 for saving and recalling the 28 scenes. There are also Blackout (Off), Auto, and Master level Up and Down buttons on the remote control.

2.1 Recalling Scene Memories

The IR Anyscene Two is controlled from an Anycolour IR remote control. This has 28 buttons labelled 1-28 for saving and recalling scenes. This gives immediate access to 28 stored DMX scenes. This AnyScene will store 58 scenes and access to the upper bank of scenes 29-58 is gained by switching DIL switch 3 ON.

Normally when the AnyScene Two is powered up it will have remembered which preset scene was last selected and will output data from that stored preset scene. Alternative scene memories can be selected by depressing the appropriate button on the remote control. The blue IR LED will flash to indicate that the remote command has been received, and the yellow Data Led will flash to show that the stored data is being recalled from memory. The DMX output will fade to the memorised scene values over a period between 2.5 and 20 seconds as selected on the DIL switches 5&6 as described above in section 1.



Normally the yellow and blue LEDs flash together on memory recall, but if the recalled memory is the same as that already in use, the yellow LED flash will be shorter.

2.2 DMX Backup feature

If no system DMX data is detected within 2 seconds of powering up, the AnyScene Two will start to output DMX data from the last accessed preset scene memory as explained above in section 2.1.

If another source of DMX data is detected in the system, the scene memory will instead remain dormant in standby/receive mode, and will capture the current DMX data on channels 1-128. Whilst in this mode, the yellow Data LED will remain illuminated, and the captured DMX data from channels 1-128 can be stored as scenes into the non volatile memory (see section 2.4) if the scene memory has not been write protected.

If the other DMX source is then disconnected or fails, the yellow Data LED on the AnyScene Two will be extinguished, and after two seconds the AnyScene Two will start to retransmit the last received DMX data for channels 1-128, providing a DMX backup feature. Once in this transmit mode, any of the memorised scenes (or blackout) can be recalled from memory at the touch of a button.

The memory unit will forget the DMX backup data if a scene is selected from memory, if the unit is powered down, or if another DMX data source is reconnected. If another source of DMX data is subsequently detected, the AnyScene Two will automatically revert to standby/ receive mode, and the yellow LED will light to show this presence of data.

2.3 Master Level control

At any time when the AnyScene Two is transmitting a DMX signal, the overall illumination level can be temporarily adjusted by using the 'Up' and 'Down' buttons on the remote to increase and decrease the setting of the Master level control (provided that DIL switch 4 is set to OFF). Note this altered Master level setting is not saved, and will be restored to full level when selecting a new scene from memory, or when powering up.

2.4 Programming Scenes

The preset scenes are protected and cannot be programmed with DIL switch 2 in the ON position. This MWP switch must be set to OFF before attempting to programme scenes.

As supplied, the AnyScene Two scene memories are cleared of data. They can be easily programmed from any source of DMX data including another AnyScene, DMX lighting desk or a computerised lighting system. The input DMX data does not have to address the full range of 128 channels stored for each scene, and any unused channels will be initialised to zero on power up.

The DMX output of the data source should be connected to the DMX data lines in the lighting system so that the preset scenes can be observed whilst setting up. When the AnyScene Two is powered up, if all is well, both Power and Data LEDs should be lit, the yellow Data LED indicating the presence of suitable programming DMX data.

NOTE that unless this data LED is illuminated and DIL switch 2 set to OFF, no programming of the scene memories will be possible.

To program the scenes into memory, adjust the controls on the DMX data source to achieve the desired lighting effect, then press down a scene select button on the remote to save the DMX data for channels 1-128 to the required scene memory. The blue IR LED



will flash and the yellow Data LED will flash off twice, to indicate that the scene memory has been programmed.

This process can be repeated for all of the 56 scene memories in any order (using DIL switch 3 to access upper and lower memory banks), any number of times until the installer is satisfied with all the preset scenes and their location in memory. Only the data last entered into each memory will be remembered. To check the memory contents, disconnect the programming DMX data source and recall the programmed presets one by one.

Scenes can be altered or changed in this way, at any time when connected to a suitable DMX data source. Any ordinary lighting desk with DMX output can be used as a programming tool and the scene memories are completely secure once the memory protect DIL switch 2 is set to ON.

2.5 Clearing all Memory contents

If required, it is possible to clear all the scene memories. This can be done by firstly unplugging the connecting RJ45 to remove both data and power. Next set DIL switch 2 OFF and DIL switch 1 to ON. Now reconnect the RJ45 to power up the unit with a DMX data source connected. This is most simply achieved by plugging the RJ45 cable into an Anytronics dimmer memory port with a suitable DMX source already connected.

If this operation has been successful, the Data LED on the AnyScene Two will stay on for about eight seconds during the memory clear operation and will then go off. Switch DIL switch 1 to OFF to restore normal operation.

NOTE that with DIL switch 2 set to ON, the scene memories are protected, so that this memory clearing operation will not work.

2.6 Programming from another AnyScene Memory

In section 2.4 above, another Anytronics scene memory can be used as the DMX data source so that scene memory contents can be copied from one memory unit to another. It is also possible to programme several AnyScenes at a time from the same source AnyScene and connector systems to facilitate this are available from Anytronics. Each AnyScene Two to be programmed must have DIL switch 2 set to OFF.

The source AnyScene should have DIL switch 2 set to ON to protect its memory contents, and should be plugged in and powered up first to make sure that it is transmitting DMX data before the other units are connected via their RJ45 leads. The yellow 'data' LEDs of the memory units to be programmed should all be lit to show that they are receiving valid programming data.

Although the same remote control will be used to control both programming and programmed AnyScenes, to avoid confusion the IR commands should be directed at source AnyScene or the programmed AnyScenes, but not at both at the same time.

Select the scenes in turn on the source AnyScene, saving each into the receiving AnyScene memories. Note that it is possible to alter the order or numbering of scenes as required into the receiving unit. It is also possible to merge data from the selected scene memories of two or more AnyScenes (one scene at a time) into a receiving AnyScene.

2.7 Replaying Scene sequences

Eight different sequences of scenes can be programmed into the AnyScene Two, each sequence being up to 31 scenes long in any required order.

Replay programmed scene sequences by pressing one of the memory buttons 1-8 to select the required sequence 1-8 before pressing the Auto button. The red Auto LED will

then be illuminated to show that the unit is in scene sequence mode, and the programmed sequence of scenes will be repeated. The fade rate between scenes can be set using DIL switches 6 and 7 as explained in section 1.

If DIL switch 4 is set to OFF, the 'up' and 'down' buttons on the remote can be used to raise and lower the Master level as in normal operation, and this adjusted Master level setting will be held whilst sequencing through the scenes.

The scene sequencing mode can be terminated at any time by pressing the Auto button again, or by pressing any of the remote scene buttons to recall a scene. If the unit is connected to a source of DMX data, the sequencing of scenes will also be stopped. If the memory unit was replaying one of the scene sequences when powered down, it will power up in the same sequence, starting from the first scene of the sequence.

2.8 Adjusting Scene Cycle Period and its changing default setting

With DIL switch 5 set to OFF the default time spent in each scene is 5 seconds, but with it set to ON the time becomes 2.5 seconds.

By switching DIL switch 4 to ON for scene period control (instead of OFF for Master level control), the time spent in each scene can be extended to 1 minute by using the Up and Down buttons on the remote control. This altered setting will be maintained whilst the unit is powered, but will be forgotten when the power is removed. The power up default setting for the scene cycle period can be changed by following this simple procedure.

- a. set DIL switch 4 to ON and set the required cycle period using the IR remote Up/Down buttons,
- b. set DIL switch 2 OFF, then DIL switch 4 OFF, then DIL switch 2 ON.

The current speed setting is now saved as the power up default, and switch 4 can be left ON or OFF to allow remote control of Master level or cycle speed as required.

2.9 Programming Sequences of Scenes

To programme such a sequence of scenes, the memory write protect DIL switch 2 must be set to OFF, and therefore any other source of DMX data should be removed from the system so as not to overwrite the programmed scenes.

Press one of the memory buttons 1-8 to select which of the eight sequences to programme. Then hold down the Auto button on the remote for a second or so until the blue LED stops flashing and the red LED starts pulsing to indicate scene sequence programme mode. [Pressing the auto button again at this stage will leave scene sequence programme mode without overwriting the existing programmed scene sequence.] Now press the memory buttons on the remote in the required order to programme the correct sequence of memorised scenes. This sequence can include any scene from 1-56 (adjusting DIL switch 3 accordingly) and immediate repeats of scenes to create longer periods in some scenes than in others.

When the sequence of scenes has been fully defined, sequence programme mode can be left by pressing the Auto button on the remote again. The red Auto LED will be extinguished. The sequence programme mode is also terminated automatically and the pulsing red LED is extinguished if the maximum of 31 scene numbers have been defined in a sequence.

When finished programming, return the memory write protect DIL switch 2 to ON to protect all the programmed scenes and sequences.

3.0 Systems with multiple AnyScene Two controllers

The original AnyScene products could only be used singly in systems, but now several AnyScene Two products can be used in the same system to provide multipoint DMX control. Push button and IR controlled versions can be used as required, and the scenes stored in them may be the same, similar or completely different. Whichever AnyScene Two product is last used to recall a memorised scene (by button push or IR input) it will retain control of the system. The Master level control of the scene or of blackout (Off) or selection of alternative scenes rests with that AnyScene until a scene is selected on another AnyScene Two controller, when that controller will take charge of the system instead and the new scene will fade in from the previous one.

NOTE : To enable this use of multiple AnyScene Two controllers in one system, ALL units must have their memory write protect DIL switches 2 set to ON to protect the programmed scenes and sequences.

3.1 Programming scenes in systems with multiple AnyScene controllers

When programming installations with multiple AnyScene Two controllers, the units to be programmed must all have their memory write Protect DIL switch 2 set to OFF. The source of programming DMX data in the system can be a DMX desk, computer, or another AnyScene with its write protection set to ON, and whichever DMX source is to be used should be connected into the system to take control of the lighting during programming. The presence of programming data at each AnyScene unit will be shown by the illuminated yellow Data LED.

Scenes can be set in turn on the DMX controller, and then memorised into the AnyScene Two units by selecting the desired preset scene on each unit to programme them. Note that when wishing to programme IR units with different scenes from each other, some care must be taken to activate only the unit you wish to programme for each scene.

This same programming procedure can be used to copy, edit or merge scenes previously stored in an AnyScene into large numbers of units to duplicate programming. When finished programming, return the memory write protect DIL switch 2 to ON on each unit to protect the programmed scenes.

3.2 Programming sequences of scenes in systems with multiple controllers

In general it is simplest to programme any required sequences of scenes into each controller individually and in turn. By removing all other AnyScenes and the programming DMX source from the system, the unit to be programmed ought then to be in control of the system, and its yellow Data LED should be extinguished. Individual programmed scenes can be recalled in turn and checked for programming whilst connected to the system.

Once the programmed scenes have been checked, move the memory write protect DIL switch 2 to OFF and follow the procedure outlined in section 2.7 to programme the sequences of scenes. Move the memory write protect DIL switch 2 to ON when this sequence programming is completed.

Once this process is complete all the programmed AnyScene Two units can be reconnected into the system, and you should have complete control. Note that if there is any other source of DMX data connected then this will override all the AnyScenes and will take control of the system.

Please note again that to enable this use of multiple AnyScene Two controllers in a system, ALL units must have their memory write protect DIL switches 2 set to ON to protect the programmed scenes and sequences.



4.0 DMX loading / connection / termination / power supply considerations

4.1 DMX loading

A maximum of 32 DMX receivers is allowed along a single DMX line without buffering. In practice the maximum number used before buffering is required is usually rather less than this out of consideration for the effects of impedance discontinuities at each connection. Each Anyscene2 has a DMX loading equivalent to two DMX receivers. For correct operation all Anyscene2s must be connected together on the same DMX twisted pair, ie not separated by a DMX buffer. The controlled equipment may be driven from a DMX buffer with all the Anyscene2s connected to the input.

4.2 DMX wiring / installation

The DMX specification is based on the use of a single DMX source at one end of a twisted pair with receiving equipment connected along the twisted pair, the last receiving apparatus along the line having a termination resistor. The use of multiple DMX sources in one system (as with a multiple Anyscene2 installation) is not directly covered by the specification. When connecting Anyscene2 units into a DMX system, the same topology should be emulated by using a direct linear connection from one end of the system to the other with a termination resistor connected at each end.

Ideally the DMX line should be linear from start to finish with no branches or junctions. Unlike the larger push button Anyscene2 unit, the IR Anyscene2 does not have two RJ45 connectors for DMX 'in' and 'through', so this arrangement is not possible unless the IR Anyscene2 is placed at one end of the DMX line. Clearly this is not possible if there are several IR Anyscene2s in one system, and in practice use of a multi RJ45 connector PCB to break out via a short stub connection to the IR Anyscene2 works well provided this stub is kept short (up to 2m). Anyscene2 units and receiving apparatus may be placed in any order along the DMX line, but the equipment at either end of this DMX line (whether receiving apparatus or an Anyscene2) should have a termination resistor fitted for best results. The termination resistor on the IR Anyscene2 is engaged by switching the large DIL switch 8 to ON.

4.3 Line Bias Networks

Each Anyscene2 is also equipped with a line bias network. This bias is enabled by setting the smaller DIL switch 1 (LBN) ON. To ensure correct operation whether there are several or just one Anyscene2 units in the system, only one Anyscene2 should have its line bias network set to ON.

4.4 Power Supply

Although the DMX standard was originally based on use of XLR connectors, the RJ45 connection system has been shown to work equally well with Category 5 cabling and it also provides the means to carry +5V power to the Anyscene2s.

At any moment only one Anyscene2 will be in control of the DMX network with the others in a standby or receive state. In the standby state they consume around 15mA per unit, and in the transmit state the DMX line loading (typically 50mA) should be added to this figure. The RJ45 DMX port on most Anytronics equipment will supply a maximum of 100mA total, so should drive at least four units as only one unit is active at a time. This capability can be boosted by using an Anytronics RJ45 expander PCB with a mains power supply to provide power to the system.



Specifications

IR Anyscene Two

- Supply : +5 Vdc ~20mA max via Category 5 DMX cable
- In/Outputs : DMX input/output via RJ45 connector.
Data received from DMX addresses 1-128
Data output to DMX addresses 1-128
- Scenes : 56 stored scenes, each of 128 channels of DMX data
- Connecting Leads Supplied : 5m RJ45 Category 5 data and supply cable
maximum length of cable recommended : 50m
use a Cat 5 shielded cable in noisy environments
- Temperature: Recommended ambient in range 0 - 40°C
- Dimensions : 86 x 86 x 30 mm, the unit is designed to mount in a standard UK double patress box (which can be supplied on request)
recommended minimum patress internal depth : 25 mm
- Weight : Gross inc 5m cable and packaging 0.5 kg Net 0.3 kg
- Compliance : Relevant current standards under EN55103-1, EN55103 -2

IR Remote

- Supply : two AA alkaline cells (included)
- Controls : 28 scene select buttons
Blackout (Off), Auto and Master up and down buttons
- Data format : rc5 IR codes with system code 30
- Range : maximum 10-15m dependent on battery state
- Dimensions : 185 x 55 x 22 mm
- Weight : Gross including batteries and packaging 0.25 kg Net 0.13 kg

