



# Animation Units Instruction & Maintenance Manual

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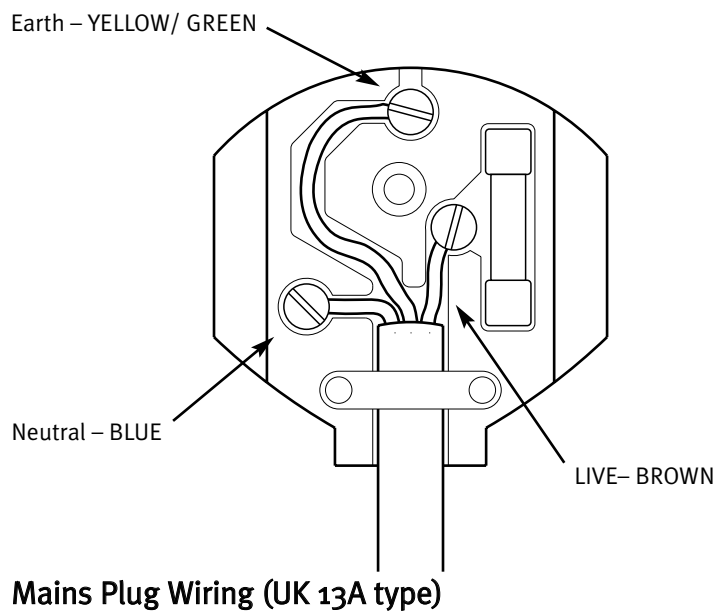
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# 1

## Fixed Speed Effects

Moving Effects with fixed speed (AC synchronous) motors are supplied for either 230V or 115V operation. These units should only be powered from non-dim circuits of the appropriate voltage. The direction of rotation may be reversed by means of a switch on the motor housing.

The nominal speed of rotation is based on a mains supply frequency of 50Hz. When used with 60Hz mains supplies, fixed speed units will rotate 20% faster than their nominal speed.



# 2

## V a r i s p e e d   E f f e c t s

Moving Effects for Varispeed operation are fitted with 12V DC (asynchronous) motors. These must be powered by a DHA DC Controller which allows remote control over speed and direction of rotation.

Varispeed effects are supplied fitted with a four-pin, male XLR connector to accept two independent control signals. The device can be set to respond to either one of these signals by means of a switch on the motor box.

# 3

## A n i m a t i o n

**Fitting**

**Fitting Non-Standard Animation  
Motor Units**

**Use of Colour**

**Focus**

**Use with Fresnel or PC Lanterns**

## F i t t i n g

The Animation Motor Unit (AMU) fits in front of the lens of the lantern, usually slotted in via the colour frame runners or, occasionally, by an alternative fitting as appropriate to the lantern.

Each motor unit has a fixing point for a safety chain. In the interests of safety this must be used.

The Animation Disc is fitted to the AMU in one of two ways: For the smaller DA and DB size discs, a boss at the centre of the disc fits directly over the motor shaft and is secured against the flat edge by tightening a small set screw. For the larger disc sizes, DC, DD and DE, the mounting boss is an integral part of the AMU. The disc fits onto this boss over a central threaded shaft and locates on three pins. It is secured with a single nut. Finally, a safety pin is fixed through the shaft to prevent the nut from working loose.

Note: AMUs for DC, DD, and DE size discs incorporate a safety latch which prevents the disc boss from becoming detached should its set screw work loose. This safety latch is intended as a secondary restraint only. If the unit is operated for long periods with the disc boss rubbing against the safety latch, damage to the unit will result and in extreme cases the disc could itself work loose. The unit should be checked periodically to ensure that the boss is firmly attached to the motor shaft and is not in contact with the safety latch.

## Non-Standard Animation Units

AMU185 for Strand Harmony and T-Spot

The AMU185 has four holes in its lantern plate to allow it to be bolted to the front of these lanterns (the enclosed colour runners do not allow the unit to slot in). To fit, remove the four corresponding screws in the front of the lantern, locate the AMU over the holes and replace the screws.

AMU012 for Microlights Microprofile

The motor plate of the AMU012 bolts directly to the front of the lantern (there is no secondary lantern plate). To fit, remove two adjacent screws from the front plate, locate the AMU over the holes and fix with the new screws provided (these are slightly longer than the original ones).

## Use of Colour & Focus

DHA animation discs have holes provided which allow colour filters to be held in place by etched tabs in the animation discs themselves or fixed with scroller tape. Strips of colour can be applied to good effect especially with flame and water patterns.

The Animation range is designed to work with a wide variety of profile spotlights, the greatest control over the image being achieved with bi-focal or zoom spots.

When using Animation Discs with gobos the focus is critical to the effect. With the gobo in sharp focus minimal movement of the image is achieved. By focusing “behind” this point the perceived movement gradually increases, starting with the smallest areas of the pattern and gradually building until the whole pattern is lost in the movement.

In “front” of the focal point the pattern of the gobo disappears much sooner and the pattern of the disc becomes more pronounced.

Each model of profile lantern has different focus characteristics and the range of the animation effect is different for each type. When developing an effect in a focus session, try using the disc in different positions on the lantern (motor to the side or above) and try different focuses and motor directions as well as different discs and gobos.

Remember that the gobo you are using will be substantially out of focus so be adventurous with your choices as results can be quite surprising and spectacular.

## Use With Fresnel or PC Lanterns

Animation Discs can also be used with Fresnel or Plano-Convex lanterns. These provide a much more literal interpretation of the disc artwork with potentially a wider angle of coverage. This is particularly effective when strips of colour filter are attached to the disc. It is worth experimenting with removing the lens as this can provide well defined images. If lamp striations are causing problems then use a light frost such as Rosco Supergel 100 in the colour frame.

The DHA catalogue and the MFX handbook have sections of ideas for using Animation effects.

## Animation Units

<b>Unit</b>	<b>Disc</b>	<b>Lantern(s)</b>
AMU012	DA	Microlights Profile
AMU013	DB	Erco Stella Ø95mm
AMU014	DC	Erco Eclipse, Stella Ø130mm
AMU075	DA	M16 mini parcan (birdie)
AMU080	DA	Times Square MR75Z
AMU085	DA	Altman Micro Ellipse Vision Micro Ellipse
AMU100	DB	Times Square Q325
AMU102	DB	Strand Patt 23
AMU110	DB	Times Square Q250
AMU125	DC	ADB DS51, DS54, DW54 CCT Minuette, Helios ETC Source Four Junior LDR Canto 250 LDR Suono 10/28, 20/40, D10/28, D20/40 Novalite 500W Followspot Selecon Acclaim Zoomspot Astral Strand Hilite 23, Minim 23 Times Square Q3Z Zero 88 Focus
AMU140	DC	Spotlight Milano Sintesi 650W Vision 650W
AMU150	DC	Coemar Zenith Strand Prelude, Quartet TBA/Thomas 650W
AMU155	DC	ADB A59Z
AMU160	DC	Altman Shakespeare ETC Source Four (fixed angle range) Strand SL Range (notSL5, SL10)

Disc Diameters  
 DA – 220mm  
 DB – 285mm  
 DC – 364mm

## A n i m a t i o n   U n i t s

<b>Unit</b>	<b>Disc</b>	<b>Lantern(s)</b>
AMU165	DD	Coemar Profilo Strand Patt 263, 264, 23N, Strand Brio Spotlight Milano Sintesi 1200W Teatro Tratto Vision 1200W
AMU180	DD	Robert Juliat 305, 306, 307, 400 series, 600 series
AMU185	DD	Altman 360Q ('Leko'), 1 KL CCT Silhouette 30, 40, Project, Freedom LDR Canto 575, Canto 1200th LDR Nota 8/22, 18/36 LDR Tono 8/22, 18/36 Lee Colortran Windsor 16-34, Windsor 24-48 Niethammer HPS 017-030, HPS 117-130 Selecon Zoomspot 1200 Selecon Pacific 12/28, 23/50, 20, 30, 40, 50, 90 Strand Cantata, Optique, Harmony, T-spot Leko (not Leko 11)
AMU190	DE	ETC Source Four (zoom range)
AMU215	DE	Niethammer HPS 011-111, HPS 212-230, HMS 112-130 Robert Juliat 310, 700 series, 900 series
AMU222	DE	ADB "Europe" series (not DN lens) requires ADB mounting plate
AMU245	DE	CCT Silhouette (including Turbo) 15, 11-26 15-32, 19-45 Coemar Inciso Lee Colortran Windsor 11-26 Niethammer HPS 209, HMS 109, ENIZOOM Robert Juliat 329 Selecon Arena Range Spotlight Milano Sintesi 2500W Strand Alto, Cadenza, Toccata Teatro Acuto Vision 2500W

Disc Diameters

DD – 420mm

DE – 516mm

# Declaration Of Conformity

## DECLARATION OF CONFORMITY

According to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name                      DHA Lighting Limited.

Manufacturer's Address  
DHA Lighting Limited  
284 - 302 Waterloo Road  
London SE1 8RQ  
England

declares, that the product(s):

Product Name:    ANIMATION UNIT, FIXED-SPEED

Model Number(s): AMU-012 /-013 /-014 /-075 /-080 /-085 /-100 /-102  
/-110 /-125 /-140 /-150 /-155 /-160 /-165 /-180 /-185  
/-190 /-215 /-222 /-245

Product Options: 120V or 230V 50/60Hz AC & All Motor Speeds

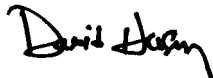
conform(s) to the following Product Specifications:

Safety:                      Relevant clauses of  
EN 60-065: 1993

EMC:                        EN50081-1    Emissions  
                              EN50082-1    Immunity  
                              EN61000-3-2   Harmonics

Supplementary Information:

The products herewith comply with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC. The products were tested in a typical configuration.



David K Hersey  
Director

Date 25/10/96

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Manufacturer's Address  
DHA Lighting Limited  
284 - 302 Waterloo Road  
London SE1 8RQ  
England

declares, that the product(s):

Product Name:    ANIMATION UNIT, VARISPEED

Model Number(s): AMU-012V /-013V /-014V /-075V /-080V /-085V  
/-100V /-102V /-110V /-125V /-140V /-150V /-155V  
/-160V /-165V /-180V /-185V /-190V /-215V /-222V  
/-245V

Product Options: 12V DC ONLY

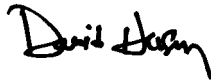
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Date 30/8/96

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