



Guardian Motion Control is a trading division of Lift Turn Move Ltd, which was established in September 2004, and is based in Birkenhead, Wirral. LTM is a financially independent company which is wholly owned and operated by the people who run the business day by day, this ensures decisions can be made quickly and customer service is top priority. A flat hierarchy, short decision making processes, team work and individual solutions - this is LTM.

We pride ourselves on fast response and delivery, we hold an extensive range of equipment and spare parts at our premises, orders and repairs can be turned round at speed. LTM understand the needs of industries where service is critical.

John Jones and David King run the business with Jenny Hobday, Dan Holme, Alison Jones, James Porter, Dawn Gerrard and Carl Hamlet in management, sales and support roles. We also have two outside sales engineers on industrial equipment - Peter Ashford and Gwyn Davies

Dave Ward is LTM's Technical Manager and is joined in the workshop by Geoff Cromwell, Phil Jones, Lee Culff, Don Paul, Wade Taylor and Mike Cromwell - all Engineers. Together we boast close to 200 man years of lifting experience.

LTM operates in two separate but related business areas.

We supply an extensive range of Lifting Equipment for the Professional Entertainment Industry. This includes the CM Lodestar & Prostar electric chain hoists, hoist controllers, flight cases and an assorted range of Lifting Equipment.

We also supply Industrial Lifting Equipment, covering Manual Hoists, Hand & Electric winches, Jacks and a range of Materials Handling Equipment.

An extensive range of equipment is available from LTM including many "off the shelf problem solvers", if you have any unusual requirements we will be pleased to source equipment for you - we have extensive knowledge of "who makes what" in Europe and beyond.

LTM started building Guardian Hoist Controllers in 2005, the range started with simple flight cased units. We have since moved into rack mounted and wall mounted controllers and build specials to suit your exact demands. A range of simple handsets are offered from the unique CM pickle through to specially developed handsets for Direct Control or Low Voltage Controlled Hoists.



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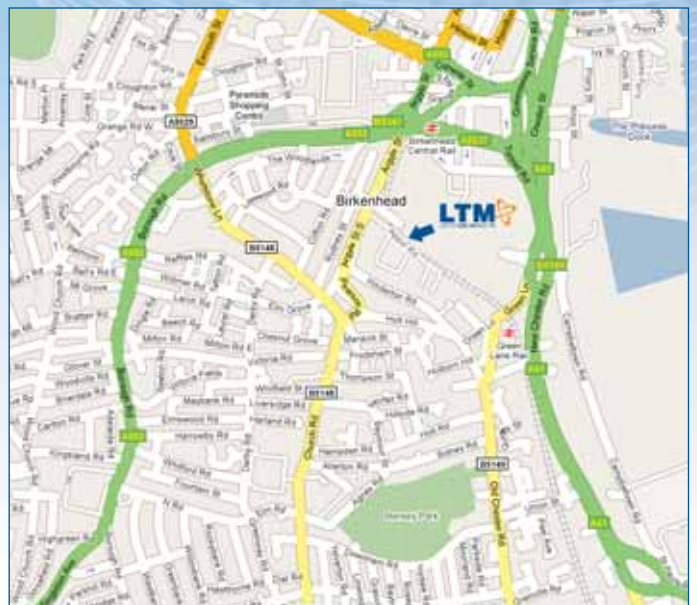
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Opening Hours: Monday - Friday 9.00am - 5.00pm
 the office is normally open outside these times

We use various methods of delivery and can deliver more or less whenever you need.



Pickle and Handsets

We offer several variations of handsets to control individual hoists for example where hoists need to be set up so that they can be positioned for a multi hoist lift.

CM Pickle

A simple handset with a metre of cable and a CEE 4 pin yellow, 16A connector. This allows a hoist to be operated at stage level to take up chain etc.



Pocket Pickle

A small and portable handset with a rocker switch built into a 16A, 4 pin, Yellow CEE connector. This has a loop to attach to a belt.



Guardian Pickle

These units come complete with up and down buttons, a metre of cable and a CEE 4 pin yellow, 16A connector. A less expensive solution for pickles.



Double Handsets for Low Voltage Hoists

This uses a simple pendant control unit with two cables which connect into the control side of two hoists. Raise and lower buttons are fitted to the pendant as is a selector switch to select hoist one, hoist two or both hoists

We can also offer special control units - for example the Wall Mounted 2 channel hoist controller with a plug in handset.



Direct Control Handsets

We offer a pickle for Direct Controlled hoists which only have the power cable. These hoists are supplied without control equipment.

The handset has two cables, one of which connects to the mains power and the other that connects into the hoist. By operating the raise and lower switches the chain can be moved through the hoist.

Direct Control Handsets, double hoist type

We offer a special handset with three cables, the first plugs into the mains supply, this is a CEE 16A, 400V, 5 pin connector. The other two cables are available for plugging into the hoist mains connectors, these are CEE 16A, 400V, 4 pin connectors. The handset has selector switches for up, neutral or down for each hoist with a Go and lockable E-Stop



Direct Control Handsets, Double Hoist type

Guardian Hoist Controllers - Flight Cased

These were the first controllers that LTM built.

We start with flight cases with rack mount components built in. We mount the electrical components onto shelves in the frame of the flight case and complete the unit with rack mounted panels specially manufactured with cut outs as required for the face mounted components.

The rear panel has CEE outlets for power and control for each hoist.

The front panel has a CEE inlet connector, breakers - one for each two hoists, phase reverse switch and a lockable E Stop.

Controllers for both Direct Control and Low Voltage Controlled hoists are available for 400V, 3 Ph, 50Hz power supply as are single phase units for 220V, 1Ph, 50Hz

Two control options are available

Local controls - where all controls are fitted to the front face of the controller; these comprise toggle switches for each hoist with up, neutral and down, Lockable E stop, Go button and a Power LED indicator.

Remote controls - The front face of the controller has a connector for the handset to locate into. The handset comes in various options but generally has toggle switches for each hoist with up, neutral and down, a Go button and lockable E Stop are also fitted. 15 metres of interconnecting cable is provided.

We offer these controllers in 4, 6, 8, or 12 channel as standard but can manufacture in most variations.

Options

Available for either Direct Control or Low Voltage controlled hoists.

Controllers for single phase power supply, 220V, 1ph, 50hz



Low Voltage Controller, Single Phase, Local Control



Low Voltage Controller, 400V, 3Ph, 6 Channel with Remote Control Handset

Guardian Hoist Controllers - Rack Mounted



Low Voltage Controller, 8 channel,
local and remote control



Low Voltage Controller, Local and Remote
Control for Liftket Hoists



Controller Handset - 6 channel

LTM build a range of higher specification controllers in rack mounted enclosures. These have a wider range of options than the standard flight cased units. The controllers can be supplied with or without flight cases so that you can build these into your design of case if required.

We start with rack mount enclosures. We build the electrical components onto shelves in the housing frame and complete the unit with rack mounted front and rear panels with cut outs as required for the face mounted components.

The rear panel has CEE outlets for power/ control for each hoist and a CEE inlet connector,

The front panel has breakers - one for each two hoists, phase reverse switch, Led power on light and a lockable E Stop.

Control on these units is via remote control- The front face of the controller has a connector for the handset to plug into. The handsets come in various options but generally have toggle switches for each hoist with up, neutral and down. A Go button and lockable E Stop allow control of the hoists individually or together. Control cable, 15m long is provided as standard.

Controllers for both Direct Control and Low Voltage Controlled hoists are available for 400V, 3 Ph, 50Hz power supply as are single phase units for 220V, 1Ph, 50Hz

We offer these controllers in 4, 6, 8, 12 or 20 channel as standard but can manufacture to suit your requirements.

Options

Available for either Direct Control or Low Voltage controlled hoists

Controllers for single phase power supply, 220V, 1Ph, 50Hz

Outlets to hoists can be CEE, Socapex, or Harting connectors.

Controllers can be supplied for single or dual speed hoists

Led indication for directional information on handsets

Linkable Controllers, these controllers generally have local and remote controls. When used individually they operate via the handset when it is connected. When the handset is not connected the local controls mounted on the controller are used.

When two controllers are used together and linked the controllers revert to local controls with the master controller Go button operating all hoists connected irrespective of which controller they are plugged into. Any E-Stop will stop the hoist operation.

Radio control.

Keypad instead of key to lock the controller.

Guardian Hoist Controllers - Wall Mounted

LTM build a range of controllers in wall mounted enclosures. They have a wide range of uses for permanent installations.

We start with a wall mounted enclosure, we build the electrical components onto the rear chassis enclosure plate.

Outlets to hoists are normally hard wired onto DIN rail terminals situated at the base of the unit.

Input power is normally hard wired, however we can provide a short extension cable with CEE connector if required.

The opening door of the controller has a green power LED, lockable E-Stop and a door isolator.

The door has a connector for the handset cable to plug into.

Controllers for both Direct Control and Low Voltage Controlled hoists are available for 400V, 3 Ph, 50Hz power supply as are single phase units for 220V, 1Ph, 50Hz

Control

Supplied with a remote hand set with run button and lockable E-Stop, toggle switches are provided for each hoist with up, neutral and down.

15 metres of cable is supplied between the handset and the plug in point on the controller.

Options are available for either Direct Control or Low Voltage controlled hoists, single phase controllers are also available.



Wall Mounted Controller, 12 Channel, Direct Control



Wall Mounted Controller for Low Voltage Hoists, 4 Channel

Options

Aluminium stage boxes are available so that a plug in point for the controller can be provided at stage level where perhaps the controller is mounted at higher level

Controllers for Single Phase power supply 220V, 1Ph, 50Hz are available

LED directional indicators on the handset

Guardian Hoist Controllers - Briefcase Type



We start with a black polypropylene briefcase, we build in rack mount components to the sides of the larger section. We mount the electrical components on to a board at the back of the case. The unit is completed with Rack Mounted panels manufactured with cut outs as required for the components.

We offer 2 versions:

Direct Control Unit available in 4 or 8 channel with CEE outlets for power to each hoist

We mount a CEE inlet connectors, breakers - one for each two hoists, phase reverse switch and a lockable E Stop.

Low Voltage Unit Available in 4 channel only with CEE outlets for power and control to each hoist.

We mount a CEE inlet connectors, breakers - one for each two hoists, phase reverse switch and a lockable E Stop.

Two control options are available:

Local controls, where all controls are fitted to one of the rack mount plates, these comprise toggle switches for each hoist with up, neutral and down, lockable E-Stop, go button and power on LED indicator.

As an option we also offer a small remote pendant with 10 metres of control cable, the pendant has a Go button and a lockable E-Stop. The selection of which hoists are to be operated is made on the controller and the pendant allows operation to take place.

Guardian Hoist Controllers - Special Design

LTM offer an extensive range of non standard designs for hoist controllers, some examples are.



2 Speed Flight Cased Controllers

2 Speed Hoist Controllers

Three off 4 channel controllers were manufactured in wheeled flight cases, these were provided for large capacity, 2 speed Electric Chain Hoists. The Chain Hoists needed 32 Amp input power to each and as the hoists were 2 speed we fitted Buccaneer multi pin connectors.

A phase reverse switch was provided complete with indicator lights showing if the controller is correctly or mis phased. The Controllers had Industrial type remote control handsets to allow hoists to be operated individually or together. Run and E-Stop button were also provided as were selection buttons for fast and slow speed..

To enable work to be carried out on site 2 off 220V and 110V, 1 phase outlets were provided complete with breakers.



Hoist and Balloon Release Controller

Controller with Balloon Release Facility

A different challenge was to construct a 9 Channel Rack Mounted Controller, this was designed to fly 3 trusses, each with 3 hoists. Local controls were mounted onto the controller with a mimic plate with 3 groups of 3 toggle switches- Truss 1, Truss 2 or Truss 3. A run and lockable E Stop was also provided.

A balloon release device was required and 3 separate buttons were provided, white, red, blue. These were wired into a simple single phase circuit to enable balloons to be released in the venue that the controller and hoists are installed.

24 Channel controller for PP Rigging

These were provided with Socapex outlets instead of CEE connectors. The controller has the option of local or remote controls and a bay has been provided in the wheeled flight case to allow the handset to be stored.

Power outlets are provided 2 off 13 Amp 3 pin for 220V power feed to charge a laptop or mobile phone, a 32 Amp CEE 400V, 5 pin Connector is also provided to allow powering of other devices.



24 channel Controllers

Wall Mounted Controller built for an inverter drive on a revolve

This controller is a wall mounted unit built for an installation where only single phase was available. We fitted an inverter drive unit which converts single phase 220V power to 3 phase 400V power. The unit has a single phase input and two 400V outputs.

The plug in handset has separate operating switches for on/off, right/left and a speed pot to set the speed. An E-Stop was also provided.



Revolve Controller

IBEX Programmable Hoist Controller Plus



Front panel



Rear panel

The IBEX Programmable Hoist Controller Plus is a state of the art motion control system providing fully computerised control of single speed hoists, combined with the simplicity and versatility of a traditional manual hoist controller. It provides as little or as much functionality as required whatever the demands of a show. With its dedicated toggle switches and select buttons for every channel, no other hoist controller can match its live performance capabilities.

Connecting to the controller is simple. It acts as an intelligent rigger's hand control, with 'up' and 'down' relay outputs for each channel, and is connected to any standard hoist controller rack using a special cable wired to suit the pinout of the handset.

Each channel may be set up as either manual control only, timed computer positioning, or encoded computer positioning (single or dual phase encoders possible). The Ibx also features a port for connection to digital load cells (weight sensors). Each channel may be configured to read its assigned load cell and shut down movement if the defined minimum or maximum weight is exceeded. Weights may also be read via the LCD screen.

An Ethernet port on the rear of the unit allows optional connection to a PC or Laptop, for full screen display of the status of all channels, and the linking of up to 10 controllers to provide up to 240 channels of control.

Cable Sets

We can provide various cable sets for Lodestars or other equipment. The standard cable sets are available in various lengths and consist of a power and control cable strapped together. The power set is a plug to socket cable with 415v 4 pin, 16 amp red cee connectors.

The control set is a socket to plug cable with 110v 4 pin, 16 amp yellow cee connectors. These are designed for Low Voltage Lodestars with limit switches. Mains cables for controller inputs or for direct control hoists are available.

We can also supply cable sets with Harting or Socapex connectors - also break out spiders to allow multipin connectors to be plugged in then distributed to several CEE connectors.

Cable sets are available in 5, 10, 15, 20, 25, 30, 40 and 50m lengths or to suit your requirements.

Features

The Programmable Hoist Controller Plus provides the following powerful features:

- » Easy to use - no complex programming techniques to learn
- » Programme sequences with manual, timed and positional links, for easy playback of complex moves
- » Run sequences, multiple cues and manual moves all at the same time
- » Set up groups of hoists so that if one should fail the others automatically halt
- » Connect digital load cells for automatic weight monitoring, with overload and underload protection functions
- » Connect to any standard manual hoist controller rack - it takes care of the rest
- » Automatic movement and weight monitoring, with group halt in the event of any error
- » Encoder positioning using single or dual phase encoders
- » Time based positioning - the controller tracks the real position of a hoist as if an encoder is fitted. This feature mode is also a very useful backup in the event of encoder failure during a live show.
- » Optional password protection to stop unauthorised users moving hoists or altering settings
- » Ethernet port allowing up to 10 PHCplus controllers to be linked together providing up to 240 channels of control, plus full screen monitoring of all channels.
- » Easy channel setup via motor libraries



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