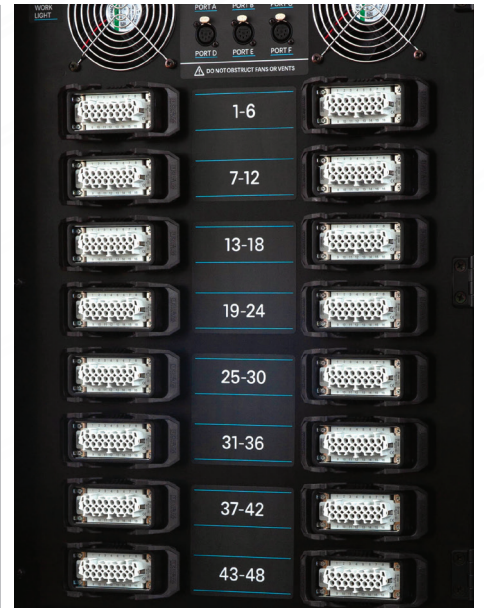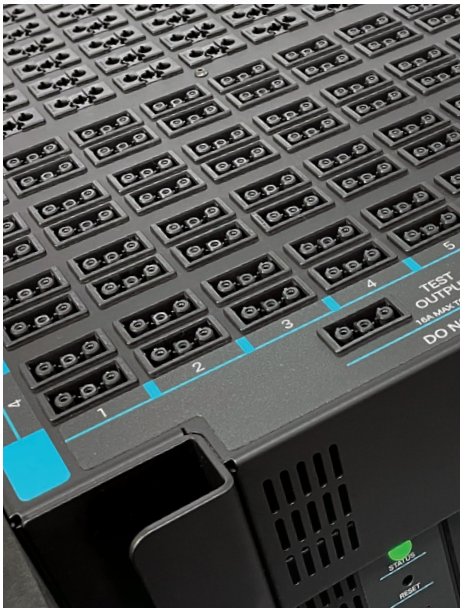# THE NEXT STAGE IN SMART POWER

UNITOUR
POWER TO CONTROL

LSC
CONTROL SYSTEMS

UNITOUR is the next generation of power distribution.

It provides smarter, safer and more reliable power for anyone involved in the system design of Audio, Video and Lighting within the entertainment industries.

General Description

There are more intelligent features to ensure your show runs smoothly in a UNITOUR system than in any other touring power distribution or dimming system on the market today.

The patented Earth Leakage Monitoring allows the user to see critical information that has never been previously available. The ability to monitor the individual ELC current on every channel simultaneously, shows potential ELC problems before the breaker trips, ensuring the show goes on without interruption. Combined with fast dropped-neutral shut-down, over/under voltage protection and earth fault indication, UNITOUR ensures both your and your equipment are safely protected.

And, in a world of essential connectivity, UNITOUR will allow you to stay in touch with the system remotely via HOUSTON X, LSC's configuration and monitoring software system. This will alert the user to any fault conditions and allow access to make or view changes in system configurations. UNITOUR can also send SMS messages to personnel if a problem arises, ideal for multi-stage festivals or distributed systems.

UNITOUR is designed and built to endure the rigours of professional touring and comes in a high-quality flight case with industry standard hardware. The QuickSwap modules allow for fast reconfiguration between events and easy internal access during servicing periods.

UNITOUR – smarter, safer power distribution for the Audio, Video and Lighting industry.

Hardware

Available as a 48-channel or 24-channel touring rack, UNITOUR can utilise either the USMT Switching modules or UDMT TruPower DimSwitch modules, in any combination.

The 48-channel version is supplied with standard QuickSwap modules to allow users to reconfigure the rack in a matter of seconds.

The 24-way rack includes fixed modules as standard but can be optioned with QuickSwap modules if desired.
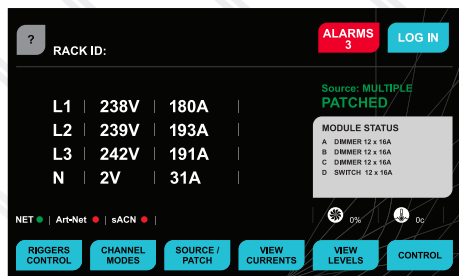
All modules include;

> **Individual RCBO per channel** to ensure that earth leakage faults only affect one output.
> **Circuit breaker monitoring** for instant notification that a breaker has tripped.
> **Individual ELC monitoring** to see potential problems before a fault occurs.
> **Individual channel configuration** allowing each output to work independently.
> **ZCS (Zero-Cross Switching)** to minimise nuisance tripping of breakers due to in-rush currents.

The system is configured and controlled by the large 18cm touchscreen on the UCMT controller module, which is located at the top of the rack for easy access and programming. As well as local touch screen control, UNITOUR can be controlled via TCP/IP, UDP, OSC and other ethernet protocols. There is also a DMX512 (RS485) input. All signal connectors are located on the front panel for easy access.
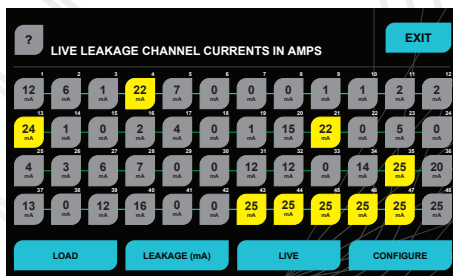
> **A 2:1 patch system** - Available for the 48-way version with Wieland GST18 connectors (patch leads available separately) along with hard power GST18 sockets for load/lamp testing.
> **Optional 6-port Ethernet/DMX Decoder** - Also available, and this can also be used as a DMX splitter from the front panel DMX input as required.
> **Dual 19-pin Socapex, dual 10/16-pole Wieland multipin outlets, PowerCON or 16A CEE connectors.**
> **The 48-way rack features Powerlock 400A, 5-wire (TN-S) 230/415V In/Thru connectors** - Auxiliary outputs are 1 x CEE 32A 3-phase and 3 x CEE 16A single phase sockets. The Australian version features 1 x 40A '56 Series' 3-phase and 3 x 20A HPM sockets.
> **The 24w rack features 1 x 125A CEE input connector** - Auxiliary outputs are 1 x CEE 32A 3-phase and 3 x CEE 16A sockets. The Australian version outlet features 1 x 40A '56 Series' 3-phase and 3 x 20A HPM sockets.
> **Both the 48-way and 24-way racks have 63A 4-pole MCBs (MFBL type) per module** - A 32A 4-pole RCBO for the 3-phase outlet, and three 16A single pole RCBOs for the single-phase auxiliary connectors.

> **LED dual-colour power status indicators (3 x phase, 1 x neutral and 1 x earth)** - Are provided for the mains input on both the front and rear of the rack to show any cable connection fault conditions. (Rear only on 24-ch rack). These indicators are connected before the main switch, to enable verification of correct power before turning on the rack.
> **Flight case options** - Include a standard 2-lid (3-with patch) or a Sliding door rack (2 doors that sit back into the case when open - not available with Patch option).
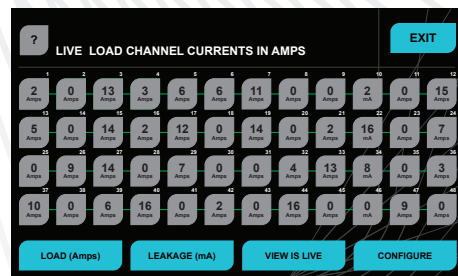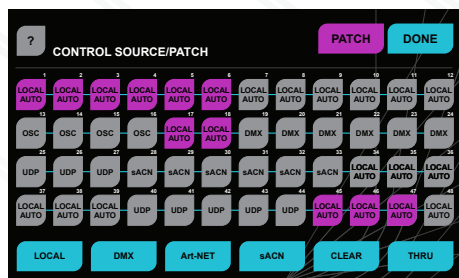
HOME MENU Showing real-time display of the RMS voltage and currents across all phases and Neutral, System Alarms, Rack temp, Module Status and Patch information.
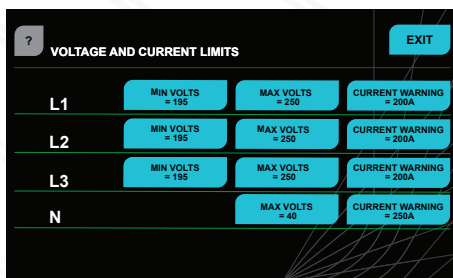

LIVE LEAKAGE CURRENTS Allowing the user to view Live RMS Earth Leakage currents across all channels. Earth Leakage levels alarms can be set by the user.
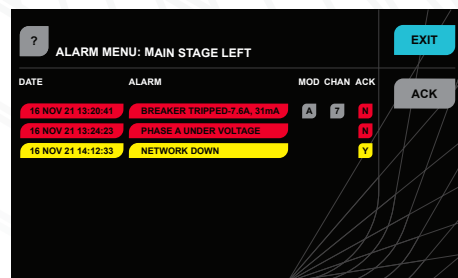

LIVE LOAD CHANNEL CURRENTS The current use is displayed for each individual channel in real-time. Alarms can be set to alert the user if they are close to exceeding their limits.

CONTROL SOURCE/PATCH Each individual channel can be set up to have a different control source, allowing multiple operators access to specific channels and outputs.

VOLTAGE AND CURRENT LIMITS Warning Limits can be set for both Voltage and Current across the incoming phases and Neutral.

ALARMS Real time and date stamped alarms that can be viewed locally or remotely via HOUSTON X software, including loss of Control Signal, Tripped RCBOs, Over-temperature and any other system critical issues.

Module Features

> **Patented Earth Leakage Monitoring per channel** - UNITOUR solves the issues of RCDs tripping without warning, by measuring the earth leakage current of each output in real time, If the level of any channel/s exceed a specified rating, an alarm is triggered. This technology allows the user to see how close the channel is to tripping the RCBO and allows the user to take preventative action before a fault occurs.

> **AutoPower** - Outputs can be configured to automatically turn on when specific signals (NDI video, OSC, sACN, etc) are received and turn off at a specific time (e.g., 10 minutes) after the signal stops.

> **Staggered start of switched outputs** - Each channel starts up with a short delay to reduce in-rush current on the upstream supply, the perfect solution when using a generator as your main power source.

> **Voltage and current indication/ measurement** - For incoming phases and neutral, with fast Dropped Neutral/Earth and over/under voltage protection.

> **Fully configurable monitoring and alarm system** - Can be applied to any aspect of the units operating parameters including incoming voltage/currents, output currents, control input issues, tripped circuit breakers, or potential fault condition and many more.

> **Realtime logging of Alarms with date and time** - Can be used for diagnosing issues after the event. Logs can be viewed directly on the UCMT screen or downloaded as a .CSV file.

> **Dimmable front panel illumination** - For breakers and channel labels via hidden 'Stealth' LED lighting.

> **Individual channel status RGB LED indicators** - Instantly see the state of every channel, including faults such as loss of phase and tripped circuit breaker.

> **Quick swap dimming/switch modules**

> **Individual sACN/Art-Net patch per channel** - Each output can be patched to its own sACN or Art-Net universe and DMX slot within that universe.

> **Real time monitoring** - Of conventional and earth leakage currents per channel.

> **TruPower relay per channel.**

> **ZCS (Zero Cross Switching)** - Reduces nuisance tripping of breakers due to in-rush current, by turning on the power as the AC waveform passes through the zero-cross point.

> **Auto-power staggered start-up** - User-selected channels can power-up sequentially on start-up.

> **16A RCBO (Type A, C-Curve) or Neutral Disconnect (C-Curve) breakers**

> **Dimmable LED** - Stealth mode illuminated front panel.

> **Each channel can be individually configured for operating mode** - Dimmer (DMX, Art-Net, sACN, OSC and NDI controlled), relay, Always On, AutoPower, Off.

UDMT Module Features

> **TruPower Relay/Dimming Module.**

> **PTFD (Pulse Transformer Fired Dimming)** - This specialist dimmer circuitry allows for the control of complex loads including neon, motors and low wattage practicals without the need for a dummy load.

> **CCT (Current Control Technology)** - Further circuitry to help alleviate nuisance tripping of breakers due to high inrush currents on power-up. Perfect technology for cold filaments as it also reduces thermal shock to lamps.

> **TruPower** - Individual channels can be configured as a dimmer or as a switch with mechanical relay bypass.

USMT Module Features

> **TruPower Relay Module** - For when only directly controllable power is required.

> **Long life relays** - The TruPower circuitry ensures that the relays never switch under load current ensuring a longer component life.

> **The perfect power distribution system for Audio, Video and Lighting power.**

UCMT Module

The UNITOUR control module (UCMT) offers the user a simple and logical interface for configuring the system, perfect for those situations when on-site power isn't yet available.

The UCMT can be powered via PoE ethernet, to allow configuration when 3-phase mains power is not available, Configuration can be done via the 18cm touchscreen or from a PC running HOUSTON X software.

UCMT Features

> **Recessed 18cm active TFT colour capacitive touchscreen** - With graphical user interface.
> **Real Time display** - RMS voltage and currents across all 3-phases + Neutral.
> **Configuration and control of all modules (USMT and UDMT).**
> **Power derived from any of the 3-phases** - If one or two phase/s are lost then the system will continue to function on the remaining phase/s.
> **Dual 100MB ethernet ports** - With internal ethernet switch. Allows multiple racks to be daisy-chained, no external ethernet switch required.

> **USB data port** - For show back up and software updates, plus two USB charging ports.
> **Can be powered via PoE** - To allow for configuration without mains power.
> **Connects to LSC's HOUSTON X software** - Allowing remote system configuration and monitoring of UNITOUR and other compatible LSC products.
> **Optional 6-port sACN/Art-Net to DMX ethernet decoder/splitter.**

HOUSTON X

HOUSTON X is a monitoring and remote configuration tool that works alongside the LSC Control product range.

Designed to run on Windows and Mac platforms and soon to support both Android and iOS tablets.

The software can quickly locate and isolate faults, monitor temperatures, phase loadings, change a channel from dimmer to power-switching mode (TruPower), save or recall show configurations all from one central location or remotely via the internet.

It is the perfect software solution for updating your power requirements, changing channel parameters of the rig and more importantly, being alerted to any fault conditions remotely as they happen, and in real-time.

Safety Features

> **Incoming power status LEDs with safety interlock** - Five dual colour LEDs show the correct connection of L1, L2, L3, N and Earth. Any incorrect connections change the LEDs from Green to Red and prevent the system from connecting power to the modules.
> **Dropped Neutral Protection** - The system will shut down in the event of a dropped Neutral thereby protecting the system until the fault is rectified.
> **Soft Neutral Protection** - The system will shut down if the specified maximum Neutral voltage is exceeded, which can occur if the Neutral cable is overloaded.
> **Earth Fault Protection** - The system will shut down if the Earth connection is faulty.
> **Optional programmable RCD module** - Schneider Electric 400A 4-pole adjustable MCCB.

Compliances

> **BS7909**
> **BS7671**
> **CE certification**
> **RCM Mark**
> **EN61439-1**
> **62368-1:2014**
> **EN61000-6-1:2007**
> **EN55015:2006+A2:2009**

UNITOUR Model Options

CODE	DESCRIPTION
UTR24	24 channels
UTR48	48 channels

MODULES	
	USMT 12 x 16A Switch module
	UDMT 12 x 16A Dim-Switch module
	UBMT blanking plate

CONTROL	
	UCM Standard
	UCM Deluxe with 6-port Ethernet/DMX decoder

OUTPUT PANELS	
	19-pin Socapex
	16-pole Weiland
	10-pole Wieland
	16A CEE
	PowerCON

INPUT POWER	
	125A CEE (24ch)
	400A PowerLock In/Thru (48ch)

AUX POWER	
	Export - 32A 3ph CEE, 3 x 16A 1ph CEE
	Australia - 32A '56 Series' 3ph, 3 x 16A GPO

MAIN BREAKER	
	400A Programmable MCCB
	400A Programmable MCCB/RCD

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