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MagicQ MQ70 Compact Console

General Overview

A. The product shall be a ChamSys MagicQ MQ70 Compact Console as manufactured by ChamSys Ltd or approved equal.

1. The lighting control console shall be an all-in-one system specifically designed to provide complete control of stage, studio, and entertainment lighting systems. The console shall be the ChamSys MagicQ MQ70 Compact console, as manufactured by ChamSys Ltd.
2. The system shall provide control of 24 DMX Universes, or 12,288 DMX512 addresses on a maximum of 12,288 control channels or parameters, with control of up to 12,288 fixtures. No external processing nodes shall be required to control all 24 DMX Universes. However, an optional upgrade shall be available to allow 48 universes/24,576 channels.
3. A maximum of 5000 cues per show may be contained in non-volatile electronic flash memory.
4. 10 Playback faders shall provide functionality for cue list control, either as cue stacks or chases, as well as being programmable for other functions such as FX masters.
5. The console shall have one inbuilt 10.1" colour multi-touch touchscreen. The touchscreen shall provide the primary interface for programming show data, multi-parameter control and system configuration.
6. Various programming and playback keys shall be provided for control over common functions.
7. A total of 10 bump buttons shall be provided, used to activate stored cues.
8. 8 multi-purpose attribute encoders shall be provided around the console display.
9. The console shall not require the use of an external monitor for normal use.
10. An external monitor port shall be provided to allow connection of an up to HD resolution (1920x1080) monitor for display of multiple windows from the console.
11. Up to 5 further displays may be connected via remote network.
12. It shall be possible to connect an external USB mouse and keyboard to the console.
13. Console software upgrades shall be made by the user via USB drive. Changing internal components shall not be required to carry out such updates.
14. The console shall feature a recovery system, allowing for the console's operating system to be restored if required.
15. The console shall provide 5 USB ports, allowing show data to be saved for archival backups or transfer to other consoles or a personal computer.
16. Systems that do not provide the above capabilities shall not be acceptable.

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Patching and Outputs

1. The console shall provide patching facilities for dimmers and multi-parameter devices via an inbuilt library of fixture profiles. The fixture library shall be updated via software-based updates.
2. The console fixture library shall contain access to over 32,000 fixture files.
3. Should any required fixture files not be present in the desk after an update, ChamSys support shall also be able to create fixture profiles upon request, free of charge.
4. It shall also be possible for the user to create fixture profiles themselves if desired, via the inbuilt head editor on the desk.
5. A search function shall be provided via the Patch window to ensure finding required fixtures is a smooth process. It shall be possible to search by channels, as well as names.
6. When patching fixtures, corresponding groups and palettes shall be automatically generated for quicker programming.
7. It shall be possible to morph from one fixture to another of the same type and retain programming data already created for said fixture.
8. It shall be possible to copy all programmed data from one fixture to another or clone a fixture to patch another with all programming data included.
9. Pan and Tilt channels shall be able to be inverted or offset via the Patch window.
10. The console shall support automatic patching and addressing of fixtures connected using Remote Device Management (RDM) via the direct DMX ports or network.
11. 24 DMX Universes shall be output via network protocols such as ArtNet, sACN and Pathport Net, while up to 4 DMX Universes can be output via the 4 local DMX ports.

Playback Controls

1. 10 Playback faders shall be provided, with 60mm potentiometers and 10 bump buttons below.
2. These faders shall provide space to record and store multiple cues per playback, programmable as either cue stacks or chases.
3. The Playback faders shall include blue/red LED tracks.
4. The bump buttons below these faders can be used to activate stored cues on the corresponding Playback or perform other user-programmable functions.
5. The Playbacks shall be pageable up to 200 pages and can be active on 2 pages at once.
6. The console shall feature a dedicated Grand Master and crossfader for overall level control.
7. Up to 5000 cues may be stored within a single show file on the console. Users shall be able to save and load multiple show files within the console memory.
8. Cues shall be able to be individually recorded and deleted.
9. Cues shall be editable via different methods, depending on user preference.
10. An Execute view with customisable grid sizes and storage for cues, groups, palettes, and various other items shall be available via the console touchscreens.
11. Items stored on the Execute grid shall be activated and released via the touchscreen.

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12. The console shall also be connectable to external Wings if required, expanding the number of available Playbacks faders and bump buttons.

Programming Tools

1. The console shall provide one 10.1" colour multi-touch touchscreen. The display shall provide access to show programming, parameter control and system configuration options.
2. It shall be possible to connect a maximum of 6 external touch monitors to use with the console: one via the HDMI port on the console, and a further 6 via remote network.
3. Data shall be temporarily stored in the programmer of the console while the user is creating or editing looks, before being recorded into cues.
4. The touch interface contains various programming windows including Group, Position, Colour and Beam, with controls for fixture parameters sorted into these windows for ease of use.
5. The user shall be able to record their own window layouts as required and quickly recall these via keys or the touch interface, allowing ease of access to desired window combinations.
6. Fixture groups and attribute palettes shall be recordable by the user for quick selection.
7. It shall be possible to edit a single palette and the data for this palette also be edited within any cues referencing the palette.
8. An inbuilt colour picker shall be accessible via the Colour window for use with colour mixing fixtures, along with inbuilt palettes and gel libraries for quick colour selection.
9. Connection to an external, PC-based visualiser system shall be possible via the console Ethernet ports, sending data over protocols such as ArtNet or sACN.
10. The plot view shall provide a 2D stage layout based upon the setup of the visualiser. It shall also be possible to select and focus fixtures via the touchscreen in this window.
11. The Output window shall allow users to setup grids and arrange fixtures for pixel-mapping.
12. The Media window shall allow control over pixel mappers and connected media servers.
13. The Timeline window shall provide a visual space, allowing users to import audio files and sync cues with the audio as required in the timeline.
14. Inbuilt FX shall be available for use and fully user customisable via controls such as speed, size, parts, segments, crossfade, spread, direction and order. Users may also program and store their own FX via the FX window.
15. Tap to time controls shall be available to set the speed of FX and chases, either on screen, or via dedicated keys.
16. It shall be possible to assign multiple FX to fixtures and be stored within a single cue.
17. Fixture selection shall be made via the Group window.
18. A choice of 8 languages shall be provided for the console user interface, providing a native user interface in: English, German, Spanish, French, Portuguese, Italian, Dutch and Russian.
19. Different programming modes shall be provided including Normal (Live) and both Theatre (Tracking) and Theatre (Non-tracking). These modes modify certain default show settings.

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Remote Control Protocols

1. Multi-console sessions shall allow the user to link more than one MagicQ system together via Ethernet and remotely control one system from another, or share Playbacks and the programmer as required, allowing for control of both systems in sync.
2. A second console shall also be linkable as an emergency backup system, able to take control of the outputs and continue show control as required.
3. It shall be possible to remotely activate and release items by use of Midi notes.
4. It shall be possible to synchronise activation of cues via Midi timecode or LTC.
5. It shall be possible to remotely activate and release items by use of OSC.
6. It shall be possible to synchronise activation of cues in time to audio via Audio Input.
7. It shall be possible to remotely activate and release items by use of UDP Ethernet remote protocol messages.
8. It shall be possible to remotely control channels via DMX input.
9. It shall be possible to remotely activate and release items using the remote input port.
10. Playbacks and other items shall have the ability to be triggered automatically at scheduled times or days without further user interaction.
11. The console shall be connectable to a remote application available on Android and iOS devices using the inbuilt Wi-Fi available on the console.

Hardware Connections

1. The rear of the console shall provide access to all hardware connections, except for 1x USB port located on the front panel. All connections are listed below.
2. Power Input, Neutrik powerCON TRUE1 110 to 240 VAC
3. DMX512 outputs via 5-pin XLR connectors: 4
4. RJ45 Ethernet connectors: 3
5. USB Ports: 5
6. XLR 3-pin desk lamp connector: 1
7. HDMI output: 1
8. Audio input: 1
9. Audio output: 1
10. MIDI ports: 1 in, 1 out
11. LTC Timecode input: 1
12. Remote input: 1

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Physical Specifications

1. All operator controls and electronics shall be housed within a single desktop console of portable size and weight as below. The console shall be:
2. Equal to or less than 525mm (20.6 inches) wide.
3. Equal to or less than 350mm (13.7 inches) deep.
4. Equal to or less than 60mm (2.3 inches) high.
5. Weigh no more than 7kg (15.4 lb).
6. The console shall contain an inbuilt UPS battery for emergency power.
7. The console shall contain an internal power unit with input via the powerCON connector. The power unit shall operate with 110-240VAC line voltage, 50 or 60Hz.

Included Accessories

1. Supplied with the console shall be accessories, as listed below.
2. Dual colour desk light: 1
3. Dust cover: 1
4. Neutrik powerCON TRUE1 Power Cable: 1