

Rave

Computerized Lighting Console Lighting Specifications



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COMPULITE

I. General

Rave is a lighting control console, designed to provide advanced lighting control capabilities to a variety of venues including clubs, stage, touring etc. Based on a powerful microprocessor, operating system and software, Rave supports features and capabilities that are traditionally available only in much larger consoles.

II. Quantities

Rave supports:

1. 1 or 2 DMX512 ports (512 or 1024 DMX512 channels)
2. 400 conventional channels (with or without scrollers)
3. 128 DMX512 controlled moving lights, of up to 48 control parameters
4. 20 extra special behavior fixtures (such as smoke machines)
5. 200 Scenes
6. 40 Chases with up to 100 steps in each
7. 40 Snaps with 20 playbacks assignments
8. 40 Qlists with up to 60 cues in each
9. 60 Focus libraries, 60 Color libraries, 60 Beam libraries, 60 fixture selection groups and 60 Effects. In Each of these categories, 40 entries (1-40) are programmable by user, and 20 (41-60) are automatically generated by the console.

NOTE:

- The total available memory, for show programming, is 2MB.
- The **actual** number of objects that can be stored depends of object sizes.
- Any object may be assigned a text label.

III. Control Interface

1. 20 Universal-Keys (UKeys) for general selection and activation of objects – Scenes, Chases, fixtures, playbacks, etc.
2. 1 LCD display with 12 soft-keys and 3 encoder wheels around it.
3. A joystick for moving light pan and tilt positioning.
4. 20 playbacks equipped with faders and 3-color LEDs. The LEDs show the assignment type and status of each playback.
5. One Master fader with blackout key and 3-color LED, that can operate as an Intensity master or Rate master.

IV. Displays

1. One LCD showing various context-sensitive data such as playback assignments, parameters' values, object labels, etc.
2. Optional external VGA, provides a rich graphical display of playback, fixtures, objects and patching data.
3. A numeric display indicates the range of objects accessible thru the UKeys at any time.

V. Technical Specifications

1. Connectors
 - a. 1 or 2 DMX ports
 - b. AC Power input
 - c. Internal battery pack
 - d. PS/2 Alphanumeric keyboard
 - e. Audio Input
 - f. 1 gooseneck desklight connector - 12v
 - g. 1 Serial RS-232
 - h. MIDI In/Thru
 - i. Ethernet 10/100 BaseT
 - j. DMX input
 - k. SMPTE input
2. Dimensions:
 - a. Width 52 cm (20.4")
 - b. Depth 37 cm (14.6")
 - c. Height 10 cm (3.9")
 - d. Weight 5.4 Kg (11.90 lb.)
3. Operating Environment
 - a. Operating ambient temperature range from 5° to 40°C (41° to 104°F).
 - b. Operating location should be protected from excessive dust and humidity.
4. Standards compliance
 - a. Complies with CE standard.

VI. System Options

The System Options menu includes:

1. I/O – Ethernet, Sound-To-Light, SMPTE and MIDI settings.
2. Protect – Password protection settings, and Clear-Console options.
3. Defaults – Object timing, Dimmer curves, chase patterns, and home scene. These defaults can be overridden for each particular object.
4. Behavior – Faders and playbacks behavior options, Master fader functionality, etc.

VII. User Access Levels

1. Rave supports 2 user access levels:
 - a. Programmer mode – enables all operations
 - b. Operator mode – enables only playback operations
2. User access level is determined by a definable password for Programmer and Operator.

VIII. Programming

1. Channel control
 - a. Channels are selected using the UKeys. Range selection/de-selection and next/previous are also available. Selection is also possible through pre-programmed selection groups. There is also a shortcut to recall the last selection, and the entire editor contents.
 - b. Intensity levels are set using the Full, On(50%) and Zero keys, the Dimmer Wheel or the faders.
2. Moving Light Control
 - a. Moving lights (MLs) are patched to a control number. Selecting the control number allows access all of the ML parameters.
 - b. MLs are selected in the same way as Channels (see above)
 - c. ML parameters values are set via the 3 encoder wheels. Each wheel has a dedicated display area on the LCD, that shows which parameter is assigned to it. Pan and Tilt values can be controlled via the wheels, joystick or external PS/2 trackball.
 - d. Parameters are arranged in 3 banks Focus Color and Beam. The banks are selected and paged using the dedicated F, C, B keys.
 - e. It is also possible to control ML parameter levels directly from the faders.
 - f. There is support for 8 and 16-bit control for any parameter.
 - g. ML parameters may be divided into steps (ranges). These steps may be defined as linear or discrete, and a stopper may be defined between every two steps.
 - h. Several parameters may share the same ML control channel, for easier access to each function (for example Color Wheel and Color Speed).
 - i. Libraries are used as a database for programming. Libraries may be stored by fixture or by fixture type. In the latter case, the library may be applied to any fixture of the same type. Libraries that are stored by fixture, may be 'tracking' meaning when they are modified, any instance in which they were used (e.g. scene) will be modified accordingly.
3. Editor
 - a. The editor provides environment for programming all objects.
 - b. There is an option to operate in Blind mode without affecting system's outputs.
4. Scenes
 - a. Scene contain values for channels ML and Extra parameters.
 - b. Scenes may also contain effects for any parameter.

- c. Each Scene may be assigned 4 separate a fade-in and delay times:
 1. overall – for intensity parameters
 2. Focus – for focus parameters only
 3. Color – for Color parameters only
 4. Beam – for beam parameters only
 - d. Scenes can be built in the editor, or directly onto playbacks.
 5. Chases
 - a. Chases are lists of steps. Each step is similar (in content and capabilities) to a scene (see above).
 - b. A Chase can be assigned a fade-in time, running rate, fade proportion (dividing the steps' time between fade-in/hold), Run mode(automatic, manual), Pattern (normal, build, random, bounce), Direction, and number loops.
 - c. Chase steps can be created from scenes.
 - d. Chases can be built in the editor, or directly onto playbacks.
 6. Snaps
 - a. Snaps include 20 playback assignments of Scenes and Chases.
 - b. It is possible to edit each assignment properties and store it within the Snap without affecting the source assignment properties.
 - c. Snaps also store running modes and priority history of the 20 assignments.
 7. Qlists and Cues
 - a. Qlists contain a lists of Cues, and a set of assignments.
 - b. A Cue is a combination of a basic look (similar to a scene) and a set of playback assignments.
 - c. Cues can be assigned Fade in/out, Delay in/out and Follow-On times. Fade and Delay times can be assigned separately the different parameter groups as in scenes (see above).
 - d. It is possible to use a fader to manually cross-fade between cues.
 - e. It is possible to assign loops and links between cues.
 - f. A cue can be assigned a SMPTE time in which it will be activated.
 - g. The assignments contained in the Cue are activated when the Cue enters, and released when the next Cue enters.
 - h. Cues can be built in the editor, or directly onto a playback.
 - i. Several Qlists may be linked to create longer Qlists.
 - j. The assignments contained in the Qlist are loaded when the Qlist is loaded, and remain active throughout the time the Qlist is active.
 8. Groups

- a. Group selections are used for fast recall of commonly used fixtures.
- b. Several groups are automatically generated by the system. The include common selections such as:
 1. All Channels/MLs.
 2. Even/Odd Channels/MLs
 3. All fixtures of a certain type
- c. It is possible use groups for de-selection.

9. Effects

- a. Effects are looks that contain integrated motion.
- b. Effects may be applied to any parameter of any fixture.
- c. Effects are stored as a library, and reused when building Scenes, Chase steps and Cues.
- d. Effects may be applied to fixtures, and then modified (time, size, offsets between fixtures, etc.) to achieve the desired look.
- e. The system automatically generates a number of common effects:
 1. Circle, 8-Shape, Spiral, Square, Triangle, etc.
 2. Various color mixing effects
 3. Various dimmer and iris effects
- f. Additionally, the programmer may build his/her own effect using the Effects Generator.

10. Storing and modifying data

- a. Scenes, Chases and Cues can be built in the Editor, or stored directly onto a playback. In both cases, the newly created object will be stored in a pool of objects of that type and given a new identification number. The object can then be used in multiple playback assignments.
- b. Groups, Effects and Libraries can only be programmed in the Editor (i.e. after pressing 'Edit').
- c. It is possible to update libraries when modifying Scenes, Chase steps or Cues that have been build using those libraries.
- d. It is possible to store a Scene/Chase step/Cue by calling the active fixtures from stage.
- e. It is possible to copy any object onto another object of the same type.
- f. When editing an existing Scenes/Chase steps / Cues / Libraries /Effects it is possible to store in 'Update' or 'Replace' mode. In Update mode, the data is added to the existing data (in case the object already exists). In Replace more, the data of the existing object is totally replaced.

IX. Playback

1. Rave can run up to 20 playbacks simultaneously. Each Playback includes a 67mm fader, a 3-colored LED, and a bump button (actually the UKey).
2. Scenes or Chases may be assigned to playbacks.
3. Normally, the fader operates as a submaster (i.e. controlling intensity level).
4. It is possible to control an individual parameter level with the fader, by storing a 'Roll-Up Scene', which is a scene with only one parameter, set at the maximal desired level.
5. When Qlists are loaded, the playbacks hold the Qlists' or Cues' assignments (see above), and the current Cue within the Qlist.
6. Normally, playbacks operate as LTP (Last Takes Precedence) for ML parameters, and as HTP (Highest Takes Precedence) for Channel intensity parameters. However, this property is configurable for each parameter in each fixture type.
7. Chases may run automatically or manually. Several Chases may be grouped together to receive simultaneous 'Go' commands by pressing one 'Go' key.
8. Assignments may be activated by pressing the playbacks UKey or by raising the fader from bottom limit (i.e. from zero).
9. When fader is raised from bottom limit (and the assignment is activated), F/C/B parameters may either jump or fade to their new positions.
10. Dedicated playback control keys exist to perform common playback operations such as: freeze, change direction and Solo.
11. There is a dedicated 'Go' key to trigger the next cue in a Qlist.
12. The individual Rate of a Chase, Effect and the fade proportion (see above) of a Chase can be set, for each playback in each Snap.

X. Configuration (Patch) menus:

1. The Patch Configuration menu supports the following operations:
 - a. Creating Fixtures (Channels/MLs/Extras) based on selected device (fixture personality definition).
 - b. Assigning access numbers to fixtures, that will be used to manipulate them.
 - c. Assigning DMX addresses to fixtures. Multiple addresses may be assigned to a single fixture.
 - d. Setting fixture orientation (X/Y patch)
 - e. Setting Dimmer properties (Curve, GM enabled/disabled and Proportional Patch).
 - f. Updating Device library.
2. There is a quick 2-step wizard that performs operations a, b and c, in the list above.
3. Device definition files can be imported through a floppy disk.

XI. Archiving

1. Two forms of archiving are available:
 - a. Internal flash disk 16/32MB – stores shows and Device definitions.
 - b. Integrated floppy drive – stores shows.
2. It is possible to load an entire show from storage device, or to load the configuration (patch) only
3. An internal battery pack enables data backup to flash in case of power failure.

XII. Communications

1. MIDI: Rave reads MIDI note commands from any MIDI source.
2. Ethernet: Rave transmits DMX over Ethernet based on Compulite's VC protocol, that can be converted to standard DMX512 using a variety of devices.
3. DMX Input: 1 DMX512 input port exists. The input is merged with the consoles output based on HTP. DMX input may be captured in the Editor and stored into objects (e.g. Scenes, Chase steps, etc).
4. SMPTE: Rave reads SMPTE time code generated by external devices, as well as internally generated SMPTE time code. SMPTE time code can be assigned to Cues, in order to automatically trigger them.

XIII. Peripherals

1. Text-keyboard for entering text labels to objects.
2. PS/2 mouse/trackball can be used for Pan/Tile control. On Raves equipped with VGA output, the mouse can be used for performing various operations on screen (such as fixture selection, playback activation, etc).

XIV. Additional Support Software

1. Rave support software includes two applications:
 - a. Fully compatible Offline Editor
 - b. Device building application (for defining fixture personalities)