### Precision

The output of each dimmer will precisely match that of its neighbour during fades, and will return to exactly the level set on the control console with no variation from channel to channel. High resolution data processing ensures that fades are smoother, with no perceptible stepping even with low wattage lamps at low intensity.

### Flexibility

Microprocessor control at the dimmer also provides a number of side benefits. These include:

- Automatic sensing of input protocol: EC90 will accept DMX512, AMX192, D54 and the new bi-directional SMX protocol without need for adjustment or customisation. Also included are up to 48 +10V analogue inputs per rack to accommodate auxiliaries.
- A selection of output curves: Each dimmer can be selected to operate according Square Law, S Curve, Linear, or Fluorescent output curves, or as a Non Dim. Alternatively, custom fade profiles can be created and held in the dimmer rack to allow new dimmers to match the output of existing dimmers.
- Maximum output: A maximum output voltage can be selected for any dimmer or group of dimmers: useful for those wishing to use 120V lamps. And the selected dimmer law will be scaled appropriately over the chosen operating voltage.
- Backup States: Up to 32 lighting presets may be recorded and stored in the Dimmer Rack. A selection of these pre-recorded lighting states can be recalled from a wall mounted station to be used as worklights, houselights or safety lights, without the control console being turned on.
- Electronic Patching: To simplify circuit to dimmer numbering, combine circuits for control or augment the control desk's soft patch, EC90 offers a patch table in the Dimmer Rack.

### THREE IN ONE

The needs, and the budgets, of the professional broadcast studio differ significantly from those of a small repertory theatre, while the lighting practices of France vary from those of Australia. To accommodate these differing requirements, EC90 is available in three levels of capability and cost. EC90HD, MD and MD*plus* all provide digital firing and the above programmable features, but offers the following distinctions:

- EC90HD (High Density): Economical, hard-wired dimmers in 10 and 25 amp ratings; a single rack can contain up to 144 dimmers.
- EC90MD (Modular): Interchangeable plug-in dimmers in ratings of 16, 32 and 50 amps. Up to 72 dimmers in a rack
- EC90MD*plus*: Physically the same as the MD, but the most advanced dimmer available today.

All three levels of EC90 utilise the same rack assembly containing power distribution, circuit protection and contracting area. The racks are sturdy steel construction and provide ample space for top or bottom fed mains and load wiring. Front access only is required, allowing racks to be mounted back to back or against a wall, minimising the required floor space. Each EC90 Dimmer Rack can contain a mix of the HD, MD and MD*plus* dimmers in all current ratings so each dimming system can be configured to meet the exact needs of the installation.

All types of EC90 provide local indication via LEDs of system status including overtemperature, communications status, control input and output. More detailed information is provided by means of a small lap-top personal

computer with custom software designed for communicating with the EC90 processors. This same PC is the means by which the dimmer curve is selected and the soft patch is assigned. Once various choices are made, the system status can be saved to floppy disc or printed out for future reference.

An integral 16-character LCD and keypad provide access to most functions of the system including selection of dimmer curve, recording of backup states and system diagnostics. The Modular versions also offer some important programmable features.

### Response Speed:

Each dimmer may be selected to operate at Normal, Fast, or Slow Response Speed.

Rapid response, can create greater inrush current which could significantly affect lamp life. On small wattage lamps used in a chase effect, this is unimportant. In the case of a 10K studio luminaire however, slower response can actually achieve longer lamp life and corresponding economies.

### Action on Mux Fail:

Unexpected loss of control signal as a result of control desk failure or disconnection could result in calamity during a live performance.

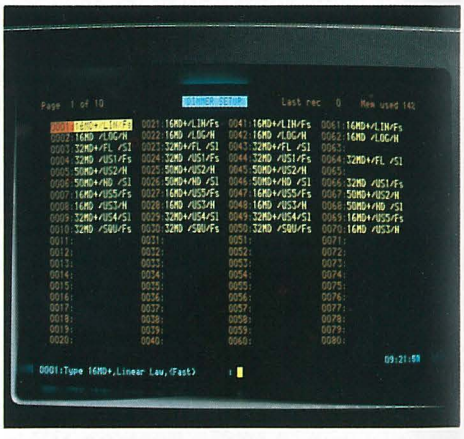
EC90 Modular systems are capable of sensing loss of multiplex signal and permit the user to program an automatic fade to any of the 32 back-up states stored in the Dimmer Rack.

### Dual Input:

Modular systems can also accept two multiplex control signals. Each dimmer may then be programmed to respond to either/or both Mux control signals, an analogue input or all three on a highest-takes-precedence basis.

Typical situations in which this flexibility is desirable include:

- Two separate studios, each with their own control system which are occasionally joined into one production studio with a single control.
- A control desk and independent backup each addressing the dimmers simultaneously.
- A house control desk and touring control desk working in parallel.
- Houselights controlled by both house and stage control system.



*Display on the monitor.*

### EC90MD*plus* & GALAXY = SYSTEM INTEGRATION

EC90HD and MD each offer a variety of positive benefits to the user, regardless of the control system driving the dimmers. But it is with Galaxy 3 that the full potential of EC90 is achieved.

A lone operator sitting at a Galaxy in the lighting control room receives full reporting of dimmer status and any fault conditions occurring either at the dimmer rack or at the lighting circuit. For the first time, the lighting operator knows at a glance whether loss of the keylight is due to a tripped circuit