UNIT DESCRIPTION AND FUNCTIONS

The RM-82 is a 19,200 Watt, 8 channel, rack mountable lighting dimmer. Each of the channels has a capacity of 2400 Watts. It is controlled via low voltage signals which may be 3 wire multiplex, USITT DMX512, or AMX192. The unit is fan cooled. Channels may be independently assigned from the unit. The unit is overtemperature and overvoltage protected and has a magnetic circuit breaker for each channel. Standard connections for channel outputs are via terminal strip.

POWER REQUIREMENTS

Each RM-82 requires SINGLE PHASE 240 VOLT AC or TWO PHASES OF A THREE PHASE 208 VOLT AC service. The neutral conductor is shared by two hots so it is important that the two hots used are of different phases. EACH PHASE must be capable of providing 80 AMPS. Line frequency is typically 60HZ. A 50HZ model is available for export, refer to the electrical rating markings on the dimmer to determine the operating frequency. One or more RM-82 dimmers are to be installed into a standard 19" equipment rack with provisions for connection to an appropriate electrical service in accordance with the National Electrical Code, ANSI/NFPA 10-1996.

INSTALLATION

PLACEMENT

The RM-82 is designed to be mounted in a standard 19" equipment rack using the four mounting holes in the face plate of the dimmer. If the dimming system will be used for touring shows, it is recommended that you provide additional support for the rear of the unit. The dimmer is fan cooled and requires no space between units when multiple dimmers are used. Air enters the dimmer through slots on the side and exits through holes in the bottom of the face plate. Make certain these ventilation holes are not obstructed. Do not place the RM-82 where it will be exposed to moisture or excessive heat.

POWER CONNECTIONS

Make certain power is removed from the circuits before you begin installation of the dimmer.
Consult your local electrical codes to determine the proper wire type and wiring methods for your installation.

Power enters the RM-82 through a small external housing at the rear of the unit. Remove the housing and install an appropriate clamp in the housing knockout hole. Pass the power cables through the housing. Behind the housing is a terminal block with three lugs. The top and bottom connections labeled "H1" and "H2" are the line or "hots". The center connection labeled "N" is the neutral. There is an additional lug labeled "G" to the left of the terminal block. This is for connecting the unit to earth ground. When connections are completed, reinstall the housing and tighten the cable clamp.

OUTPUT CHANNEL CONNECTIONS

Channel outputs are via terminal strips on the rear of the unit behind an external knockout housing. Remove the housing and install cable clamps in the knockout holes. Pass the load wires through the housing. Starting from the left as you face the rear of the RM-82, the first eight terminals are load outputs A-H. The remaining eight terminals are the neutrals and can be connected in any order. There is also a ground lug terminal to be used to connect your load circuits grounds. Reinstall the housing after making connections.

CONTROL SIGNAL

A control signal enters the RM-82 through connectors on the rear of the unit. If you are using the 3 pin multiplex protocol ("LMX" or compatible), plug the control cable into the 3 pin "XLR" connector. If you are using the DMX-512 protocol, plug your 5 pin DMX control cable into the 5 pin to 9 pin adapter supplied with the RM-82 and plug the 9 pin connector into the upper 9 pin connector on the rear of the dimmer. In either case, the lower 9 pin connector and the ribbon cable jumper that is supplied can be used to connect from the lower connector of the first dimmer into the upper connector of the next dimmer and so on. See the attached drawings for clarification.

CONSOLE POWER

The RM-82 is shipped with the power supply set to provide +15 volts DC console power when using the 3 pin multiplex protocol. If the RM-82 is to be used with older consoles that require AC power, contact Lightronics service department for assistance.

SETUP

RESETTING THE UNIT

The unit may be reset at any time from the front panel. Resetting the unit clears all channel patch information (reassigns the dimmer to respond to console channels 1 - 8), and reinitializes the internal circuits. To reset the unit: Press and hold the **MENU** button until a message "RESETTING SYSTEM" appears on the front panel LCD display. You must hold the button in for aprox 6 seconds.

ASSIGNING DIMMER CHANNELS

The RM-82 has eight dimming channels labeled A-H. Each of these channels may be assigned a channel number from 1 to 512 and in any order. Multiple dimmer channels may be assigned to a single console fader if desired. This gives you the ability to soft patch at the dimmer itself. If you wish to reassign the dimmer channels, press the **MENU** button once to enter the setup mode. The bar graph for the first dimmer channel will blink indicating the current dimmer channel. Press the **SELECT** button once. You will see a small arrow pointing to a number to the left of the display. This is the number of the console fader that this dimmer channel is assigned to. Press the **UP** or **DOWN** arrow buttons until the desired console fader number is displayed. To select this number and move to the next dimmer channel, press the **MENU** button. After assigning the last channel, press the **MENU** button once more to return to normal operating mode.

MANUAL OPERATION

Dimmer channels can be operated manually frtom the dimmer front panel. Press the **MENU** button until the desired channel's "bar graph" is blinking. Press the **UP** or **DOWN** arrow buttons until the desired level is reached. Press the **MENU** button to advance to the next channel. To return control to your console, press the **MENU** button until you go PAST the last channel and stop. After approximately 4 seconds the dimmer will return to console control.

NORMAL OPERATION

As you operate faders on your console the associated channel levels are indicated on the RM-82 display. The display will also indicate any abnormal conditions such as over temperature or over voltage. The fan will run at full speed whenever there is a control signal present and one or more faders are at full on. The fan will drop to half speed a few minutes after all faders are lowered to full off and will stop shortly after the control signal is removed.

SCENE SAVE

The RM-82 has the ability to internally save a single scene which may be activated remotely. The scene remains in the unit's memory when it is shut off and will be available the next time the unit is powered on.
A saved scene is not lost when the unit is reset.

TO SAVE A SCENE:

1.   Create the scene from a control console or from the front panel of the dimmer itself by activating the applicable channels.
2.   Press and hold the front panel **SELECT** button until you see the message "SAVING SCENE" on the dimmer LCD display (about 5 seconds).
3.   At this point the scene is recorded to the dimmer internal memory and is thus saved.

TO ACTIVATE A SAVED SCENE:

A scene previously stored in the dimmer is activated by connecting together pins 1 and 9 of either DB9 connector. The DB9 connectors are on the rear of the dimmer. This may be done via a remotely located switch. The activated scene will remain active as long as pins 1 and 9 on the DB9 connectors remain connected together. A message "REM" appears on the dimmer front panel LCD display when a saved scene is active.

NOTE:
Each dimmer saves the channels settings for THAT DIMMER ONLY. If more than one dimmer is installed, connect the external switch wires in parallel and save the scene in each dimmer as described above.

MAINTENANCE AND REPAIR

TROUBLESHOOTING

VERIFY THAT ALL POWER IS REMOVED FROM THE DIMMER BEFORE HANDLING THE UNIT.

• To simplify troubleshooting - reset the unit to provide a known set of conditions.

• Check that the console is powered and that console channels are correctly patched or set.

• Check the control cable between the dimmer and its console.

• Verify the loads and their connections.

OWNER MAINTENANCE

There are no user serviceable parts inside the unit.

The best way to prolong the life of your unit is to keep is cool, clean, and dry. It is important that the cooling intake and exit vent holes are clean and unobstructed.

Service by other than Lightronics authorized agents may void your warranty.
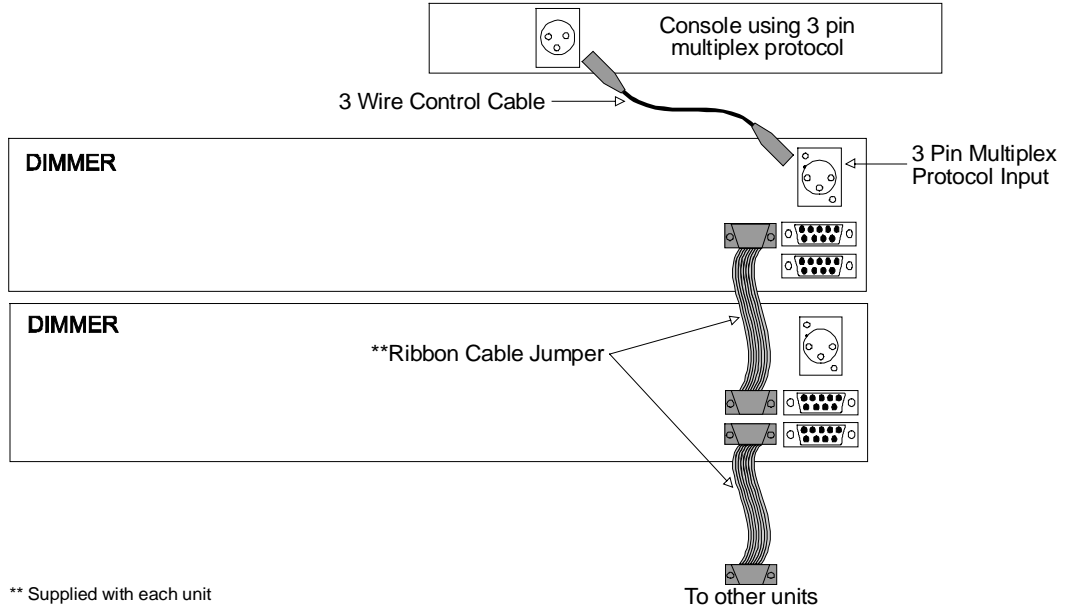
OPERATING AND MAINTENANCE ASSISTANCE

If service is required, contact the dealer from whom you purchased the equipment or contact Lightronics, Service Department

Lightronics recommends that you record the serial number of your unit for future reference.
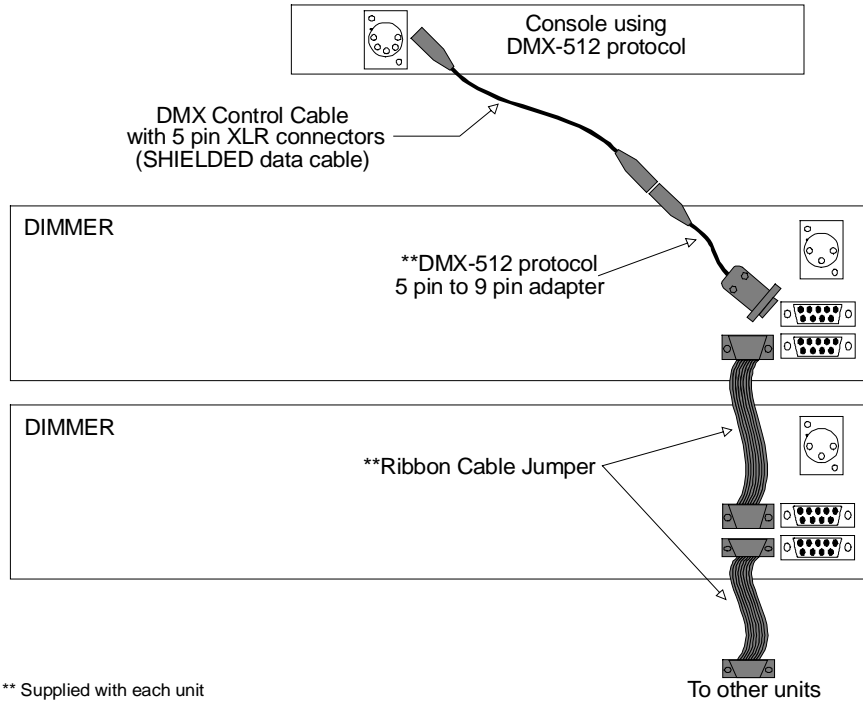
SERIAL NUMBER _____

MULTIPLEX CONNECTIONS

Console using 3 pin
multiplex protocol

3 Wire Control Cable

DIMMER

3 Pin Multiplex
Protocol Input

DIMMER

**Ribbon Cable Jumper

** Supplied with each unit

To other units

DMX-512 CONNECTIONS

Console using
DMX-512 protocol

DMX Control Cable
with 5 pin XLR connectors
(SHIELDED data cable)

DIMMER

**DMX-512 protocol
5 pin to 9 pin adapter

DIMMER
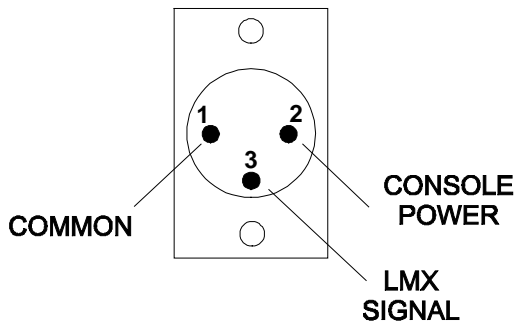
**Ribbon Cable Jumper

** Supplied with each unit

To other units

MULTIPLEX (LMX) CONNECTOR
3 PIN MALE XLR
Used on rear of chassis

DMX-512 CONNECTOR
5 PIN MALE XLR
Used on adapter cable

1
2
3
COMMON
CONSOLE
POWER
LMX
SIGNAL

COMMON
1
2
3
4
5
NOT USED
NOT USED
DMX
DATA -
DMX
DATA +
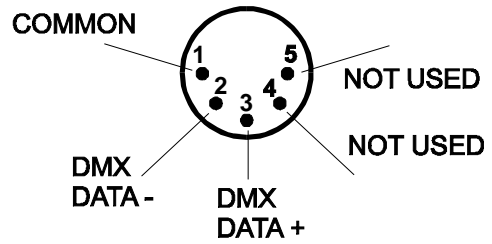
I/O CONNECTOR
9 PIN MALE (DB9)
Used on rear of chassis

CONSOLE
POWER
LMX
SIGNAL
COMMON
1   2   3   4   5
6   7   8   9
DMX
DATA -
DMX
DATA +