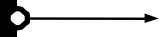


# TRITON routing switcher

*Telecom Equalizer and Reclocker*

*Product model no. TTN-RECL8*



INSTALLATION MANUAL

MANUAL PART NO. 04-052616-004 Rev. 2  
MARCH 20, 2003

*the most watched worldwide*

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For customer service, please call (800) 547-8949. For comments or questions concerning this manual, please contact: Technical Publications Department, P.O. Box 30816, Salt Lake City, Utah 84130 USA. Phone: (801) 972-8000. Fax: (801) 977-1602. Email: SLCTechpubs@THmulti.com

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## *Electromagnetic Radiation Notice*

The following information is given to note compliance with the United States Government Federal Communications Commission (FCC) Rules (47 CFR Part 15) designed to limit interference to radio and TV reception. The ruling establishes measurement procedures and frequency criteria for Class A computing devices (commercial and industrial applications) with the following conduction and radiation limits:

### *CLASS A COMPUTING DEVICE: CONDUCTION LIMIT (Part 15.812)*

<i>Frequency (MHz)</i>	<i>Maximum RF Line Voltage (uV)</i>
0.45 - 1.6	1000
1.6 - 30	3000

### *CLASS A COMPUTING DEVICE: RADIATION LIMIT (Section 15.810)*

<i>Frequency (MHz)</i>	<i>Distance (meters)</i>	<i>Field Strength (uV/m)</i>
30 - 88	30	30
88 - 216	30	50
216 - 1000	30	70

The policy of Thomson is one of continual development and improvement. For that reason Thomson uses components and manufacturing techniques that provide the current state-of-the-art suppression of electromagnetic radiation. This equipment, in production before October 1, 1981, has not been tested to the above listed measurements. However, equipment such as this delivered after October 1, 1983 will have the measurements on record at the factory. Therefore, in compliance with the stated FCC Regulation, the following information is provided for the user:

## **NOTE**

### *Interference to Radio Communications*

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. As temporarily permitted by regulation it has not been tested for compliance with the limits for Class A computing devices pursuant to Subpart J of of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference. **Operation of this equipment in a residential area is likely to cause interference** in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

## ***Hardware Warranty and Software License***

Please contact your local Thomson representative for hardware warranty and software license information.

## ***Parts and Service***

Thomson maintains a full stock of replacement parts available for immediate shipment.

### *NORTH AMERICA PARTS AND SERVICE*

Please call toll-free **1-800-547-8949**.

You will be switched automatically to the parts and service representative nearest you.

For email correspondence: [broadcast-support@thmulti.com](mailto:broadcast-support@thmulti.com)  
Internet: <http://www.thomsongrassvalley.com>

### *INTERNATIONAL PARTS AND SERVICE*

Contact your Thomson representative.

***Revision history***

Current revision of this document is the uppermost in the table below.

<b>Revision</b>	<b>Replaces</b>	<b>Date</b>	<b>Change Description</b>
2	1	20/03/03	Updated with the new Thomson/GVG design.
1	0	15/06/01	Added Document Part Number to Front Page
0	-	30/04/01	Initial Revision

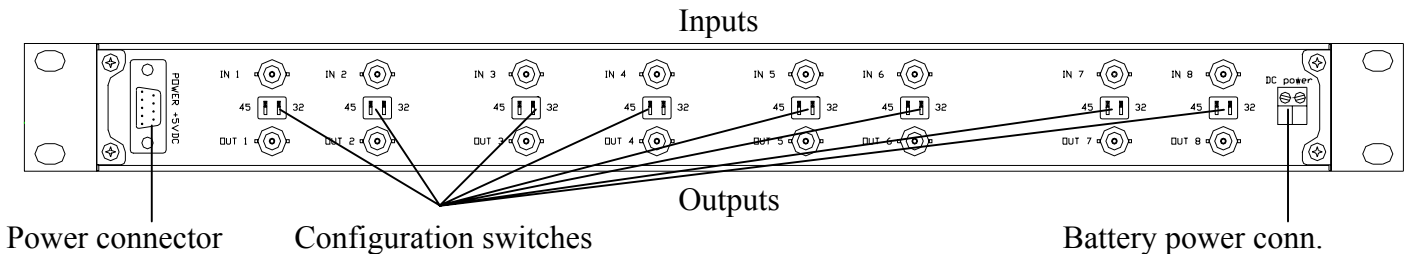
# 1 General

The RECL8 is an 8-channel re-clocker for 34Mbit/s G.703 HDB3 signals or 45Mbit/s DS-3 telecom signals. RECL8 meets ITU-T G.703 for HDB3 coded signals, and the specifications of the North American standard for plesiochronous digital hierarchy (PDH) telecommunication systems. This unit can be used in combination with one of Triton high-bandwidth video routing switchers to create a 34Mbit/s HDB3 router, or a 45Mbit/s DS-3 router. The RECL8 provides automatic cable equalizing and re-clocking on all channels. High performance circuits in SMD technology assure undiminished signal quality.

## 1.1 Specifications

Data rate:	34Mbit/s G.703 HDB3 / 45Mbit/s DS-3
Number of inputs:	8 terminated
Equalization:	Automatic 0-12 dB loss and better
Number of outputs:	8
Impedance:	75 ohms
Return-loss:	> 18dB
Signal level:	1000mV fixed on 75Ohm load
Connector:	BNC
AC power:	External power supply 100 - 260 VAC
DC power:	+5V, connector DB9 male
Power option:	built-in DC-DC converter for battery supply
Dimensions:	483 x 44 x 45 mm (19", 1RU)

## 1.2 Connection drawing



## 2 Power connection

**Do not connect mains to the desktop power supply before connecting the power supply to the router.**

Connect the DB9 female connector from the desktop power supply to the main unit. Tighten the screws to assure a proper contact. To connect mains to the desktop power supply you need a mains cord with IEC 320 connector.

Each RECL8 unit is normally delivered with the desktop power model **AC ±5V / 30W**. Upon customer request, RECL8 can also be delivered with **DC ±5V / 30W**, which may be fed by a 36 – 72 VDC mains power source. A Frame mounted power supply solution is also available.

Please refer to the latest Triton Product Catalogue for power supply types, or call Thomson Grass Valley for this information.

If any third party power supply is used each RECL8 requires +5V DC with a minimum current of 1.0A. The following pin-out is used on the DB9 male power connector:

Pin 1	0V
Pin 2	+5V

Please see marking on the screw terminal of your unit.

**Please Note! The unit can either be used with +5V power connected via DS9 connector or battery power connected via screw terminal.**

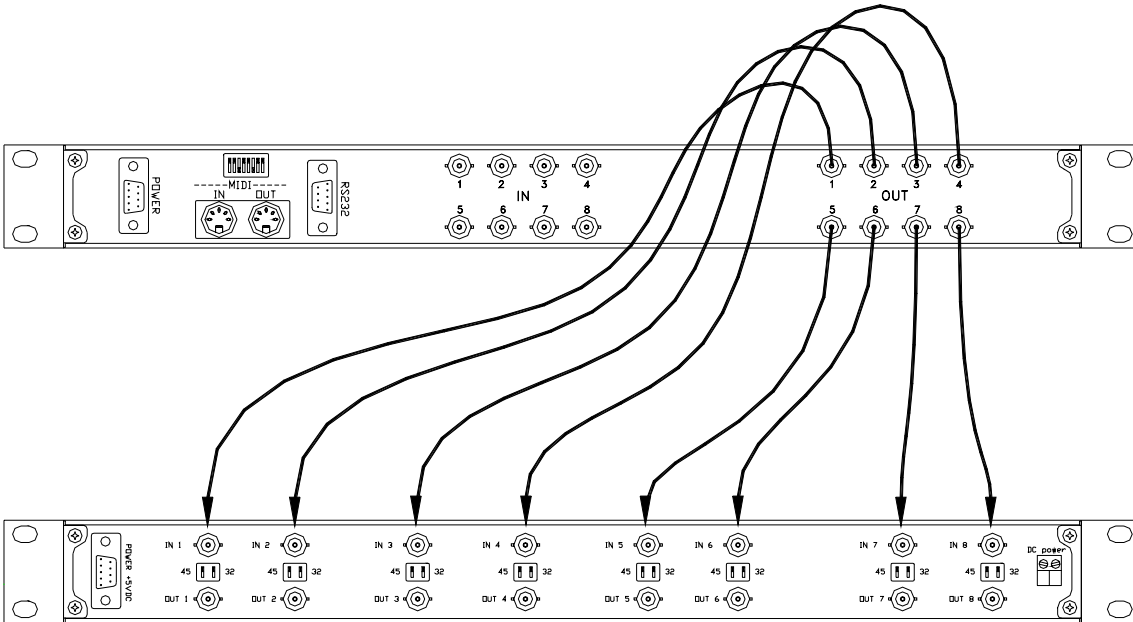
Please connect battery power via the screw terminal on the right hand side of the unit. (back-plane view) Before connecting battery power please check that the correct voltage is marked below the screw terminal.



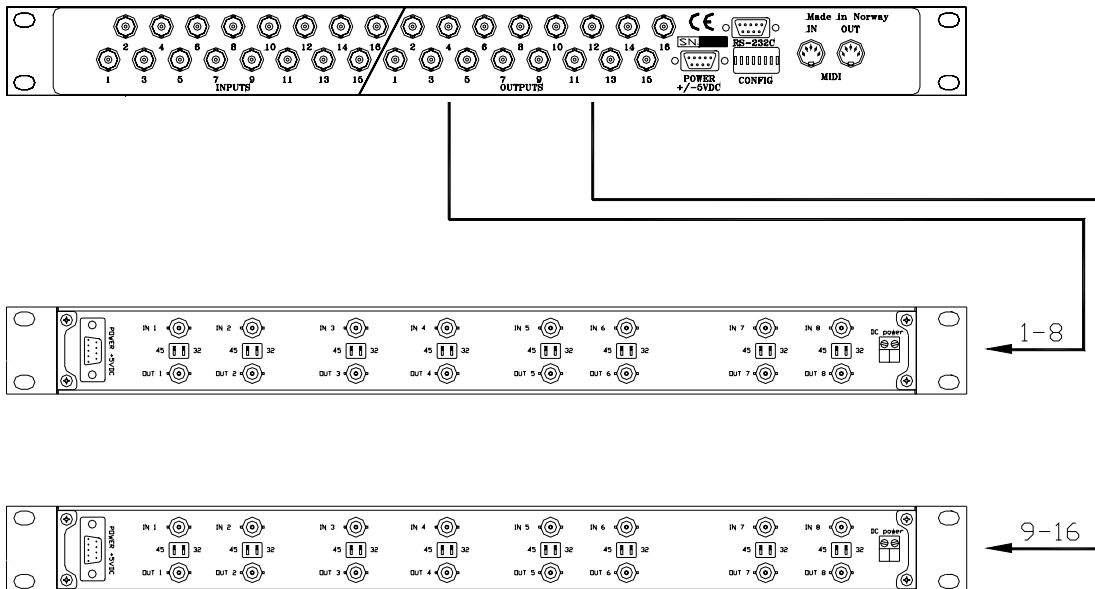
### 3 Connecting the RECL8 to your Triton router

Please connect the RECL8 to your Triton router as shown below.

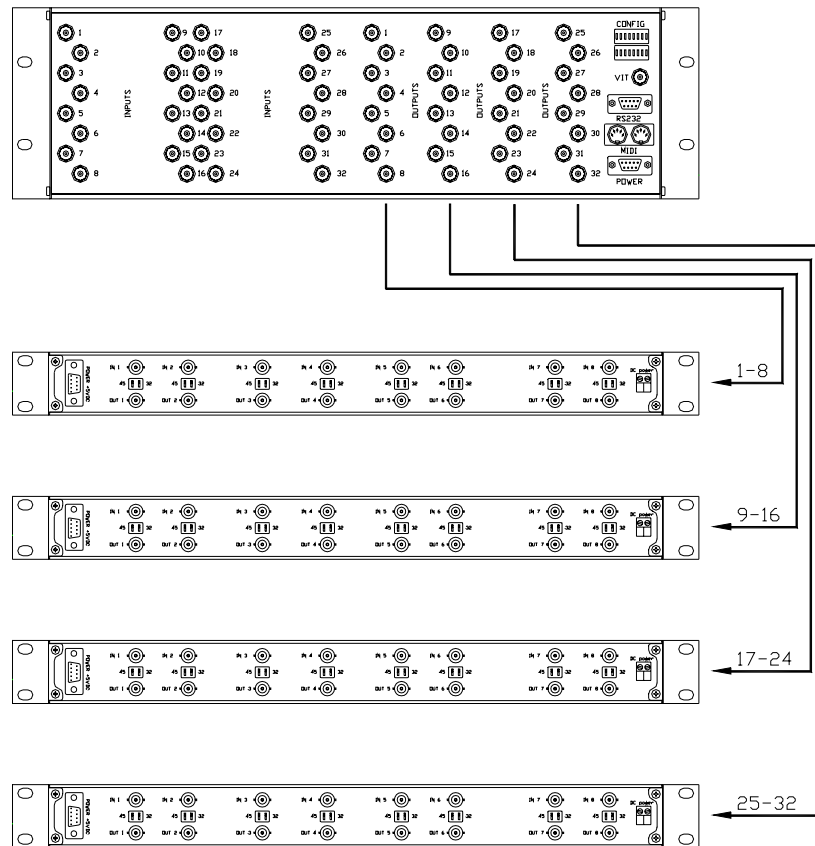
#### *8x8 router*



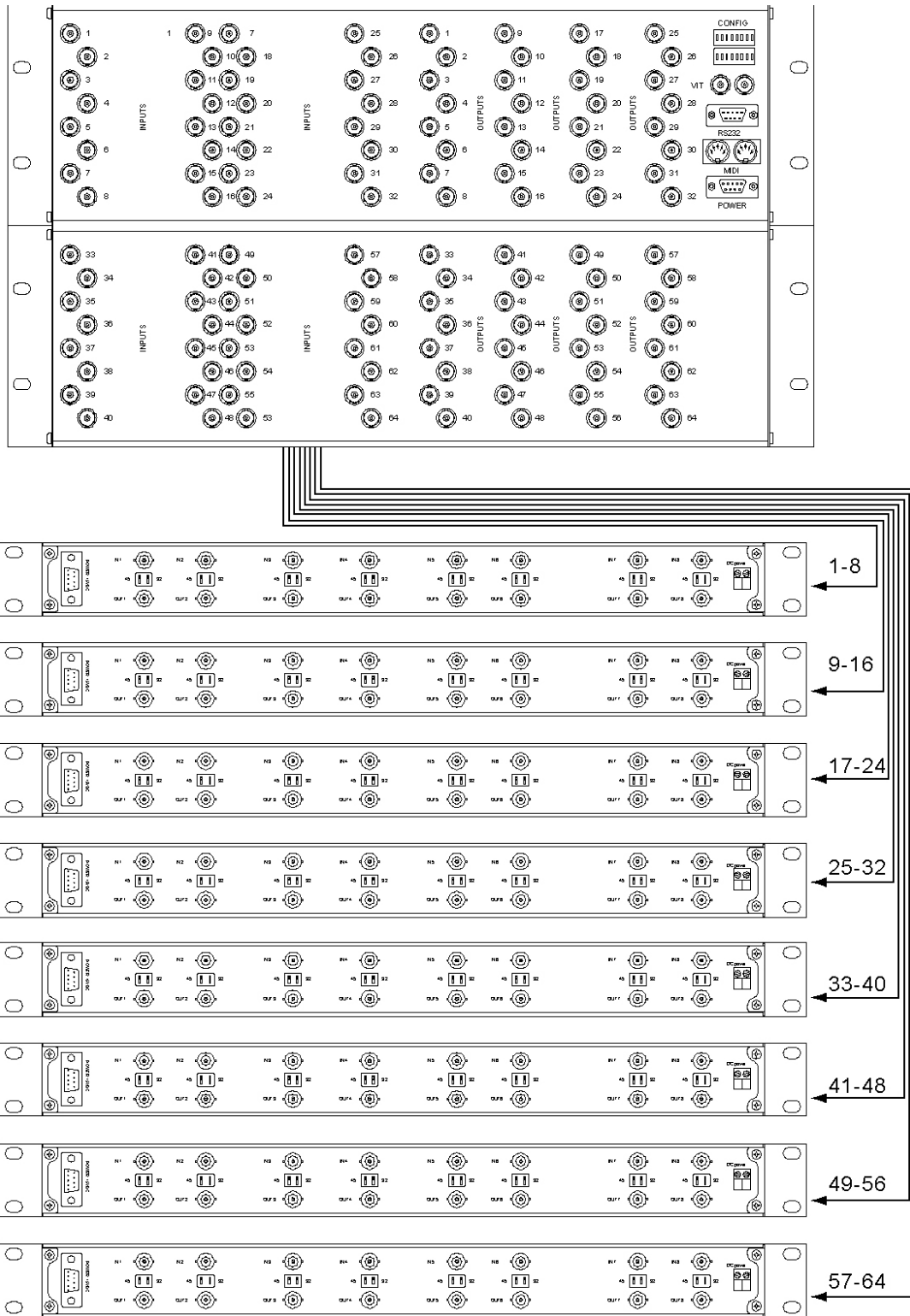
#### *16x16 router*



32x32 router



64x64 router



## 4 Re-clocker configuration

### 4.1. Re-clocker Mode

Switch 2 on each DIP-switch sets the mode of the re-clocker on each individual in- and output. When the switch is in LEFT position, the output is re-clocked for 45Mbit/s (DS3), and when in RIGHT position, the output is re-clocked for 34Mbit/s (E3).

### 4.2. Pulse shape

Switch 1 on each DIP-switch sets the shape of the pulse for the re-clocker on each individual in- and output. When the switch is in LEFT position, the pulse is shaped for 34Mbit/s (E3), and when in RIGHT position, the pulse is shaped for 45Mbit/s (DS3).

Normal switch setting is thus:

<u>Switch</u>	<u>1</u>	<u>2</u>	<u>Re-clocking mode/Pulse shape</u>
	L	R	34Mbit/s (E3)
	R	L	45Mbit/s (DS3)