



Cisco D9804 Multiple Transport Receiver Software Version 2.0 Quick Reference Guide

Please Read This Entire Guide

Veillez lire entièrement ce guide

Bitte das gesamte Handbuch durchlesen

Sírvase leer completamente la presente guía

Si prega di leggere completamente questa guida

Important

Please read this entire guide before you install or operate this product. Give particular attention to all safety statements.

Important

Veillez lire entièrement ce guide avant d'installer ou d'utiliser ce produit. Prêtez une attention particulière à toutes les règles de sécurité.

Zu beachten

Bitte lesen Sie vor Aufstellen oder Inbetriebnahme des Gerätes dieses Handbuch in seiner Gesamtheit durch. Achten Sie dabei besonders auf die Sicherheitshinweise.

Importante

Sírvase leer la presente guía antes de instalar o emplear este producto. Preste especial atención a todos los avisos de seguridad.

Importante

Prima di installare o usare questo prodotto si prega di leggere completamente questa guida, facendo particolare attenzione a tutte le dichiarazioni di sicurezza.

Notices

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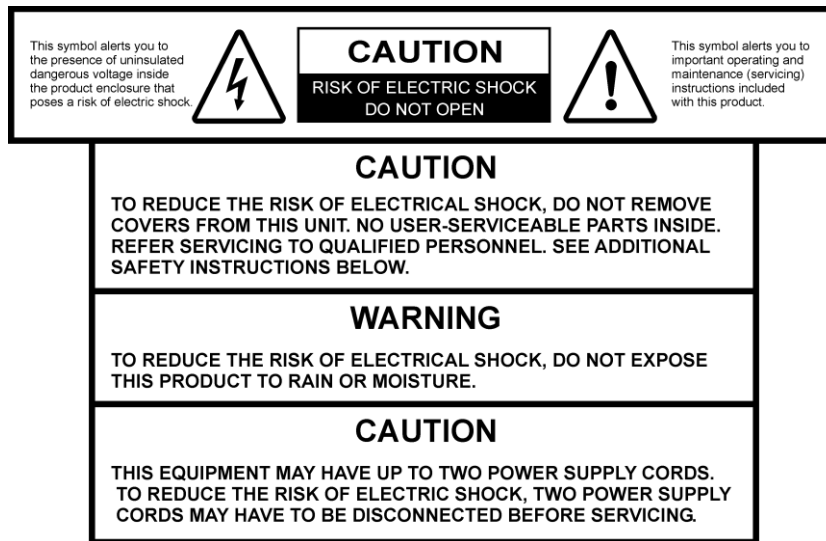
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Safety Precautions



Protect yourself from electric shock and your system from damage!

- This product complies with international safety and design standards. Observe all safety procedures that appear throughout this guide, and the safety symbols that are affixed to this product.
- If circumstances impair the safe operation of this product, stop operation and secure this product against further operation.

Avoid personal injury and product damage! Do not proceed beyond any symbol until you fully understand the indicated conditions!

-  You will find this symbol on the product and/or in the literature that accompanies this product.
It indicates important operating or maintenance instructions.
-  You may find this symbol on the product and/or in the literature that accompanies this product.
It indicates a live terminal; the symbol pointing to the terminal device.
-  You may find this symbol on the product and/or in the literature that accompanies this product.
It indicates a protective earth terminal.
-  You may find this symbol on the product and/or in the literature that accompanies this product.
It indicates excessive or dangerous heat.

Safety Precautions

Power

- Important! This is a Class I product. You must earth this product. This equipment may have up to two power supply cords. To reduce the risk of electric shock, two power supply cords may have to be disconnected before servicing.
- This product plugs into a socket-outlet. The socket-outlet must be near this product, and must be easily accessible.
- Connect this product only to the power source that is indicated on the rear panel of this product.
- If this product does not have a mains power switch, the power cord serves this purpose

Enclosure

- Do not allow moisture to enter this product.
- Do not open the enclosure of this product unless otherwise specified.
- Do not push objects through openings in the enclosure of this product.

Cables

- Always disconnect all power cables before servicing this product.
- Always pull on the plug or the connector to disconnect a cable. Never pull on the cable itself.
- Do not walk on or place stress on cables or plugs.

Factory service

- Refer service only to service personnel who are authorized by the factory.

Règles de sécurité

Protégez-vous des risques d'électrocution et protégez votre système contre les endommagements éventuels.

Ce produit respecte les standards internationaux de sécurité et de conception. Veuillez observer toutes les procédures de sécurité qui apparaissent dans ce guide, ainsi que les symboles de sécurité qui figurent sur le produit.

Si, du fait des circonstances, ce produit cesse de fonctionner normalement, cessez de l'utiliser et empêchez-en l'utilisation future.

Évitez le risque de blessures et de dommages aux produits! Ne procédez à aucune tâche tant que vous n'aurez pas entièrement assimilé les conditions indiquées par un symbole!

-  Ce symbole figure dans la documentation accompagnant ce produit. Il indique d'importantes instructions de fonctionnement ou d'entretien.
-  Ce symbole peut être attaché à ce produit. Il indique une borne sous tension; la direction indique la borne.
-  Ce symbole peut être attaché à ce produit. Il indique une borne de terre de protection.
-  Ce symbole peut être attaché à ce produit. Il indique une température excessive ou dangereuse.

Alimentation

- Important! Ce produit fait partie de la classe I. Vous devez le mettre à la terre.
- Ce produit se branche dans une prise murale. Cette dernière doit être placée à proximité du produit et doit être facilement accessible.
- Ne branchez ce produit qu'à la source d'alimentation indiquée sur son panneau arrière.
- Si ce produit n'a pas d'interrupteur d'alimentation générale, le cordon d'alimentation remplit ce rôle.

Enceinte

- Ne laissez pas l'humidité pénétrer dans ce produit.
- N'ouvrez pas l'enceinte de ce produit, sauf instructions contraires.
- Ne forcez pas d'objets dans les ouvertures du boîtier.

Câbles

- Débranchez toujours tous les cordons d'alimentation avant de réparer ce produit.
- Tirez toujours sur la prise ou le connecteur pour débrancher un câble. Ne tirez jamais directement sur le câble.
- Ne marchez pas sur les câbles ou les prises et n'y exercez aucune pression.

Réparations effectuées à l'usine

- Ne confiez les travaux de réparations qu'au personnel autorisé par l'usine.

Sicherheitsvorkehrungen

Schützen Sie sich gegen elektrischen Schlag, und Ihr Gerät gegen Beschädigung!

- Dieses Gerät entspricht internationalen Sicherheits-und Ausführungsnormen. Beachten Sie alle in diesem Handbuch enthaltenen Sicherheitshinweise sowie die am Gerät angebrachten Warnzeichen.

Safety Precautions

- Sollten örtliche Umstände den sicheren Betrieb dieses Gerätes beeinträchtigen, schalten Sie es ab und sichern es gegen weitere Benutzung.

Vermeiden Sie Verletzungen sowie Beschädigung des Gerätes! Wenn Sie zu einem der folgenden Warnzeichen gelangen, nicht weiterarbeiten, bis Sie seine Bedeutung voll verstanden haben!



Dieses Symbol erscheint auf dem Gerät und/oder in der ihm beiliegenden Literatur. Es bedeutet wichtige, zu beachtende Betriebs-oder Wartungsanweisungen.



Wenn dieses Zeichen am Gerät angebracht ist, warnt es vor einer spannungsführenden Stelle.



Dieses Symbol kennzeichnet auf dem Gerät die Anschlußstelle der Sicherheitserde.



Wenn dieses Zeichen am Gerät angebracht ist, warnt es vor heißen Stellen, die zu Verbrennungen führen können.

Netzspannung

- Wichtig! Dieses Gerät ist ein Produkt der Schutzklasse I. Es muß geerdet werden.
- Das Gerät ist an einer Steckdose anzuschließen. Diese muß sich leicht zugänglich in unmittelbarer Nähe des Gerätes befinden.
- Die Netzversorgung muß den auf der Rückwand des Gerätes angegebenen Werten entsprechen.
- Falls sich kein Hauptschalter am Gerät befindet, dient das Netzkabel diesem Zweck.

Gehäuse

- Das Innere des Gerätes ist vor Feuchtigkeit zu schützen.
- Das Gehäuse ist nicht zu öffnen.
- Niemals einen Gegenstand durch die Gehäuseöffnungen einführen!

Kabel

- Vor jeglicher Wartung des Gerätes sind alle Kabel zu entfernen.
- Hierzu grundsätzlich am Stecker oder Verbindungsstück und niemals am Kabel selber ziehen.
- Nicht auf die Kabel oder Stecker treten oder diese einer Zugbelastung aussetzen.

Hersteller-Wartung

- Wartungsarbeiten sind nur durch vom Hersteller autorisierte Techniker vorzunehmen.

Precauciones de seguridad

¡Protéjase contra la electrocución y proteja su sistema contra los daños!

Este producto cumple con los criterios internacionales de seguridad y diseño. Observe todas los procedimientos de seguridad que aparecen en esta guía, y los símbolos de seguridad adheridos a este producto.

Si las circunstancias impiden la operación segura de este producto, suspenda la operación y asegure este producto para que no siga funcionando.

¡Evite lastimarse y evite dañar el producto! No avance más allá de cualquier símbolo hasta comprender completamente las condiciones indicadas!

-  **Encontrará este símbolo en el impreso que acompaña a este producto. Este símbolo indica instrucciones importantes de funcionamiento o mantenimiento.**
-  **Es posible que este símbolo esté pegado al producto. Este símbolo indica un terminal vivo, la flecha apunta hacia el aparato terminal.**
-  **Podría encontrar este símbolo pegado al producto. Este símbolo indica un terminal de protección de tierra.**
-  **Podría encontrar este símbolo pegado al producto. Este símbolo indica calor excesivo o peligroso.**

Alimentación

- Importante! Este es un producto de Clase I. Tiene que estar conectado a tierra.
- Este producto se conecta a un enchufe. El enchufe necesita estar cerca del producto y ser fácilmente accesible.
- Conecte este producto únicamente a la fuente de suministro eléctrico indicada en el panel posterior del producto.
- Si el producto no tiene interruptor para la línea principal, utilice el cordón toma de corriente para este propósito.

Cubierta

- No permita que la humedad penetre en este producto.
- No abra la cubierta del producto a menos que se indique lo contrario.
- No introduzca objetos a través de las aberturas de la cubierta del producto.

Cables

- Siempre desconectar todos los cables eléctricos antes de revisar o reparar el producto.
- Tire siempre del enchufe o del conector para desconectar un cable. Nunca tire del cable mismo.

Safety Precautions

- No camine ni aplique presión sobre los cables o enchufes..

Revisión y reparación de fábrica

- Solo personal aprobado por la fábrica puede darle servicio al producto.

Precauzioni di sicurezza

Protegetevi da scosse elettriche e proteggete il vostro sistema da possibili danni!

- Questo prodotto soddisfa le norme internazionali per la sicurezza ed il design. Seguite tutte le procedure di sicurezza contenute in questa guida e i simboli di sicurezza applicati al prodotto.
- Se circostanze avverse compromettono la sicurezza d'uso di questo prodotto, interrompetene l'uso e assicuratevi che il prodotto non venga più utilizzato.

Evitare infortuni alla persona e danni al prodotto! Non procedere oltre a qualunque simbolo fino a quando non si siano comprese pienamente le condizioni indicate!



Questo simbolo, che appare nella letteratura di accompagnamento del prodotto, indica importanti istruzioni d'uso e di manutenzione.



Sul prodotto potete vedere questo simbolo che indica un dispositivo terminale sotto tensione; la freccia punta verso il dispositivo.



Potrete trovare il presente simbolo applicato a questo prodotto. Questo simbolo indica un terminale protettivo di messa a terra.



Potrete trovare il presente simbolo attaccato a questo prodotto. Questo simbolo indica un calore eccessivo o pericoloso.

Alimentazione

- Importante! Questo prodotto è di Classe I. Va messo a terra.
- Questo prodotto si inserisce in una presa di corrente. La presa di corrente deve essere in prossimità del prodotto, e deve essere facilmente accessibile.
- Collegare questo prodotto solamente alla fonte di alimentazione indicata sul pannello posteriore di questo prodotto.
- Se questo prodotto non è dotato di un interruttore principale, il cavo di alimentazione funge a questo scopo.

Chiusura

- Proteggete da umidità questo prodotto.
- Non aprire la chiusura di questo prodotto a meno che non sia specificato diversamente. Non inserire oggetti attraverso le fessure della chiusura.

Cavi

- Staccare sempre tutti i cavi di alimentazione prima di svolgere l'assistenza tecnica al prodotto.
- Per scollegare un cavo tirate la spina o il connettore, non tirare mai il cavo stesso.
- Non calpestare o sottoporre a sollecitazioni i cavi o le prese.

Riparazioni di fabbrica

- Per le riparazioni contattate solamente personale tecnico autorizzato dalla fabbrica.

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1

Introduction

Overview

This chapter is a general introduction to the Cisco® D9804 Multiple Transport Receiver Quick Reference Guide.

In This Chapter

- About this Guide..... 2

About this Guide

This Quick Reference Guide includes all the information you'll need to install and begin using your Cisco D9804 Multiple Transport Receiver. Use it to familiarize yourself with product features and operation, and for quick reference when needed. The guide provides complete operating instructions and other important information about your satellite receiver. It is recommended that you read this guide before you begin using the receiver.

Your Satellite Receiver

The Cisco D9804 Multiple Transport Receiver (MTR) is designed for satellite content distribution applications requiring DVB-S2 reception capabilities with digital transport distribution into terrestrial or similar types of networks. The D9804 receiver can receive up to four satellite signals and de-combine up to six DVB-ASI transport signals from any of the incoming satellite signals. It outputs the content on a DVB-ASI transport for further distribution into digital networks serving either digital terrestrial or other types of consumer re-distribution networks.

Key Features

- Four L-Band inputs with active demodulators
- DVB-S QPSK demodulation
- DVB-S2 QPSK/8PSK demodulation
- DVB-ASI input
- Fixed key BISS descrambling
- Six pairs of DVB-ASI outputs
- Seven contact closures triggered by programmable alarm conditions
- Dual redundant power supplies
- Field upgradeable software and security
- Front panel LCD for control & monitoring
- Tuning preset configurations
- Deterministic Remultiplexing

2

Quick Setup Guide

Overview

If satellite receiver setup details are unavailable, you can perform a Quick Setup of your D9804 MTR by following the step-by-step instructions in this Quick Setup Guide. After performing the Quick Setup, you can change the current settings to better suit your receiver operating requirements. If you are unsure about which receiver settings to use, contact your local service provider for assistance.



IMPORTANT:

Only preauthorized subscriber services can be received by your satellite receiver. If an unauthorized signal is present, a warning message is displayed on the TV monitor. If this happens, contact your local service provider for more information.

In This Chapter

■ Satellite Receiver Startup	4
■ Connecting the Unit	5
■ Front Panel Controls and Display	10
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Satellite Receiver Startup

- 1 Check your installation:**

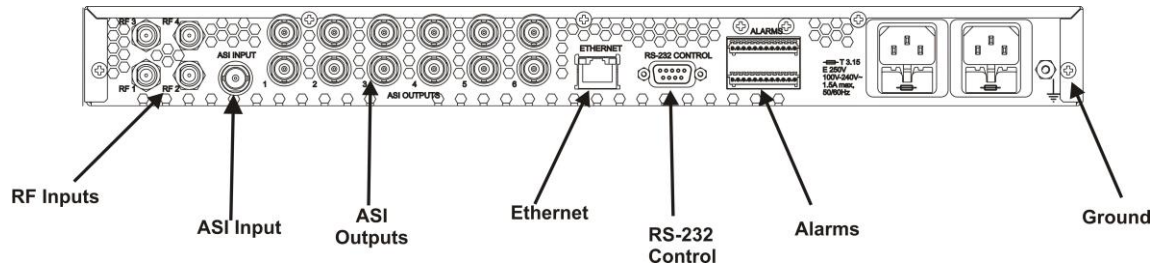
Check that your receiver is correctly installed and connected to the satellite LNB antenna, to other A/V equipment (as required), and to AC power.

- 2** The message Application Starting appears on the receiver front panel while it is powering up. It takes about 30 seconds for the receiver to completely power up.
- 3** Power up the receiver by connecting it to an AC source.
- 4** Follow the Quick Setup Instructions to set up your receiver for your network to receive your authorized programs.

Connecting the Unit

Electrical Connection

Proceed as follows to connect the D9804 MTR to other equipment.



- 1 Connect the L-Band signal to one of four RF inputs.
Note: The LNB power is only available on ports RF1 to RF3. The factory default setting for LNB power is OFF.
- 2 If desired, connect the ASI IN port to an asynchronous serial interface device for uplink monitoring.
- 3 Connect the ASI OUT ports to an asynchronous serial interface device.
Important: A double-shielded coaxial cable is required to connect to the ASI OUT and/or the ASI IN port in order to meet EMC requirements.

Connecting Ethernet Cables

If desired, the appropriate RJ-45 mating connector may be used for remote monitoring and control either via SNMP or the built-in Web browser.

Connecting Power Cables

- 1 Connect the power cord (supplied with the unit) between the rear panel power receptacle and a 100V to 240V, 50/60 Hz ac power outlet.
 The power cord (consisting of appliance coupler, flexible cord, and plug) supplied with this product meets the requirements for use in the country for which this product was purchased. In general, the power cord must be approved by an acceptable, accredited agency responsible for evaluation in the country where the product will be used.
- 2 Connect the Alarm connector on the D9804 MTR to the external alarm monitoring equipment.
- 3 If required, use the Ethernet port on the D9804 MTR for external control and monitoring via web or SNMP.
- 4 Connect AC power to both of the rear panel power supplies for proper functioning.

For further information, see the specific product manuals in question. When connecting the power source to the D9804 MTR it takes less than a minute for the unit to initialize. The front panel display shows the startup screen.

Maintenance of EMC Compliance

Double-shielded (braid/foil or braid/braid) cables should be used for all ASI I/O and RF inputs. Single-shield cables are acceptable for all other inputs and outputs. For terminal block (Alarms) I/O, no shielding is required.

Control/Connector	Type	Description
RF Inputs	F	Each input accepts an LNB signal input. RF1, RF2 and RF3 can provide remote LNB power for use when no external LNB power source is available.
ASI Input	BNC	Asynchronous Serial Interface Input.
ASI Outputs	BNC	Six sets of two duplicate Asynchronous Serial Interface Outputs. Although not labeled on the rear panel, the top row is designated 1a to 6a, and the bottom row is designated 1b to 6b.
Ethernet	RJ-45	Ethernet IP data control and monitoring.
RS-232 Control	DB-9	Telemetry data output: 7 bits, even parity, 1 stop bit, 9600 bps. These outputs are user-configurable.
Alarms		7xNO/NC contacts triggered by programmable alarm conditions.
Ground	Screw	Grounding point for the receiver.

Configuring the Operational Mode

The D9804 can be configured to be in Base mode (default for new D9804 receivers), using FPGA application version 1.00 or Deterministic Multiplexing (DM) mode, using FPGA application version 2.00. The following table describes the FPGA versions:

FPGA Version	Description
1.00	Base mode functions: Independent decombine, raw, pass, drop output format for six ASI outputs

FPGA Version	Description
2.00	DM mode functions: Up to four independent decombine, raw, pass, drop output formats that can be routed to the ASI output ports, and one independent Deterministic Remultiplex function (remux) that can be routed to the ASI output ports.

Proceed as follows to select the FPGA version:

- 1 Move to the Versions menu and use the up and down arrow keys to navigate to the FPGA Version entry.
- 2 Press **SELECT** and use the up and down arrow keys to scroll the list of available FPGA versions.
- 3 Press **SELECT** to select the displayed FPGA version.
- 4 Press the right arrow key to navigate to the Select menu. Alipress **SELECT**. You will be prompted to Abort or Continue. The FPGA version is loaded the next time the D9804 MTR is rebooted.

Setting up RF Tuning Parameters

- 1 Move to the Tuning menu and use the up and down arrow keys to navigate to and set the following parameters.

Entry/Selection	Options
Enabled	Set to Yes to enable the input.
Inband Data	Set to Ignore to use local data.
Input	4 RF ports to select.
Modulation	DVB-S or DVB-S2. If set to DVB-S2, set FEC to Auto.
Downlink Frequency	Type in frequency (GHz).
Set FEC	If the FEC is unknown, leave it at "auto". It must be set to Auto if DVB-S2 modulation is used.
Set LNB Voltage	RF1, RF2, and RF3 Note: Only RF1 to R3 have DC power.
LNB Voltage options	- 13, 18, and OFF.
Set LO frequency	LO (Local Oscillator) frequency in GHz.
Rolloff	Only required for DVB-S2.
IQ	Normal, Inverted, or Auto.

- 2 Press **MENU** to exit and save the changes.

Note: If the changes are saved successfully, the screen returns to the main menu. If the changes are not saved successfully, an error message appears and operators will need to choose whether to continue editing. Select **Return** to continue editing. If **Exit** is selected, all the changes will be lost.

Setting up ASI Output Parameters

- 1 Move to the Routing Output menu and use the up and down arrows keys to navigate, select, and configure the six ASI outputs (ASI 1 through 6). Any output can receive data from any one of the 4 RF inputs or from the ASI input.

Entry/Selection	Options
Enabled	Set to Yes to enable the output.
Inband Data	Set to Ignore to use local data.
Source Stream	Select the input source (RF1 to RF4) for the output.
Format	Decombined - decombines the transport according to the selected CT ID (combined transport ID). Remux - the CT ID will be remultiplexed when passed to the selected output. Drop: filters the input prior to sending; will allow all PIDs except those entered. Pass - filters the input prior to sending; will only allow PIDs that have been entered. Raw - passes the input directly to the output.
PCR Correction	Enable or Disable. Not used for Decombined or Remux streams (see Format above).
BISS Index	1 to 512.
Output Rate Type	Fixed Rate - Pass, Drop, and Raw streams are output. The transport stream rate is stuffed with null packets to achieve the output rate. The fixed output rate is in the range from 1 to 213.7 Mbps. This is also the maximum output bitrate when the selected Bitrate Type is "Source Rate". Source Rate - Pass, Drop, Raw, Remux, and Decombined streams are output. The transport stream output rate is identical to the stream input rate to a maximum value set by the Fixed Rate setting. Note: Source Rate is always used for decombined and remux streams. Full Rate - Pass, Drop, and Raw streams are output. The transport stream rate is not stuffed with null packets. The output rate will be 213.7 Mbps.
Burst Mode	Enable or Disable (default).

Entry/Selection	Options
CT ID	Enter the Combined Transport ID that you want to route to the output in the range from 1 to 65535. The CT ID must match an entry in the transport list matching the combined PID and BISS Index.
CT PID	Particular packet that is going to be decombined.
Fixed Rate	Must be a valid bit rate in the range from 1 to 213.7 Mb/s.
Com PID	Set the combined transport PID for the common stream in the range from 1 to 8192.
BISS Idx	Set the BISS index for the common combined transport stream if the common stream is scrambled, in the range from 1 to 512.
Com ID	Set the transport ID for the common stream in the range from 1 to 65535.
Reg PID	Set the combined transport PID for the regional stream in the range from 32 to 8192.
BISS Idx	Set the BISS index for the regional combined transport stream if the regional stream is scrambled in the range from 1 to 512.
Reg ID	Set the transport ID for the regional stream in the range from 1 to 65535..

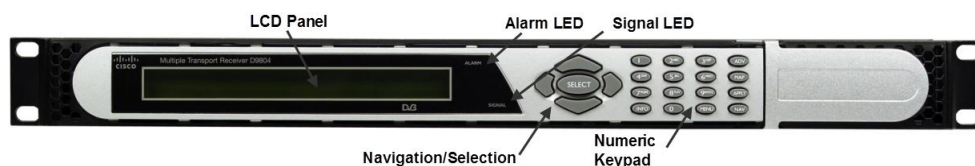
- 2 Press **MENU** to exit and save the changes.
- 3 Move to the **CA** Menu, and use the left and right arrows keys to select the BISS index and CA session word to be used to decombine the stream.

Note: The CA session words are typically provided by your service provider.

Entry/Selection	Options
BISS Index	1 through 512.
Even SW	SW (Session Word); must enter SWs in pairs (12 hexadecimal characters, 0-9, A-F).
Odd SW	SW (Session Word); must enter SWs in pairs (12 hexadecimal characters, 0-9, A-F).

- 4 Press **MENU** to exit and save the changes.

Front Panel Controls and Display



Numeric Keypad

The numeric keypad is used to enter alphanumeric values. The **MENU** key functions as an “escape” key moving you up the menu tree, and the **INFO** key displays contextual help, when available.

LCD Panel

The LCD provides information on the selections available at any menu level, current settings for parameters, and certain status and alarm indications as shown in the example illustration below.

```

2007/07/30   D9804 MTR   17:26
RF:1234      ASI:1      OUT:123456
  
```

The backlit LCD display can display two 40-character lines. Typically, the top line may be status data or identifier information. It can also display optional functions available for tuning operations. The bottom line will show selections or parameter values available using the navigation/selection keypad. The items are selected by pressing the **SELECT** button (center button) on the navigation/selection keypad.

LEDs (Alarm and Signal)

The unit includes two LEDs. One indicates alarm status; the other indicates signal status, as described in the following table.

LED	Signal State/Color	Explanation
ALARM	Red	Solid for five seconds indicates a Warning.
	Red	Flashing indicates an Alarm.
SIGNAL	Green	Solid indicates all of the following conditions: ■ all RF inputs are enabled, all inputs are locked to a signal, and are not muted. ■ all routed ASI outputs are operating without an error.

LED	Signal State/Color	Explanation
	Green	Flashing indicates one of the following conditions: ■ difficulty with an input, route or output. ■ one or more RF inputs, or the ASI input are not synchronized. ■ one or more ASI outputs are routed, but muted by a fault condition. ■ no RF signal is present or detected, or it is muted.
	Off	Off indicates all of the following conditions: ■ no RF input signal is available, enabled or detected, or the input is muted. ■ no ASI input is present. ■ no valid inputs are available.

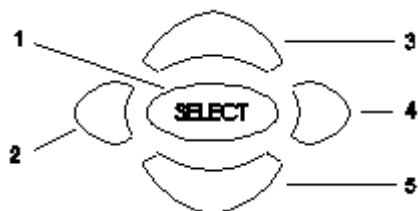
Keypad Operation

Input Keypad

The input keypad includes a set of navigation buttons on the left side of the pad, and a set of data function buttons on the right side of the pad.

Navigation/Selection

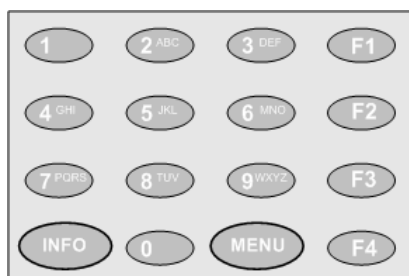
The navigation buttons (LEFT, RIGHT, UP and DOWN) and the **SELECT** button on this keypad are the primary controllers. Each navigation button performs various functions, depending on the current state of the menu system (i.e., sometimes the left navigation button backspaces over an entry and sometimes moves the cursor to a different menu item). Once the cursor is over the desired function, press the **SELECT** button to choose the current item (this may go to a different menu or change an option), and then to save the setting/selection.



Button	Description	Function
1	SELECT	Runs the highlighted command or opens the highlighted menu.
2	LEFT arrow	When moving through menus, highlights the menu item to the left. When entering data, moves the cursor to the left. In some menus, backspaces over the data entry.
3	UP arrow	Highlights the menu item above.
4	RIGHT arrow	When moving through menus, highlights the menu item to the right. When entering data, moves the cursor to the right.
5	DOWN arrow	Highlights the menu item below.

Number/Function Buttons

The number/function buttons include standard alphanumeric buttons for entering values into settings fields, and dedicated function buttons that control specific functions. The button functions are described in the following illustration and table.



Button	Function
Alphanumeric	Pressing the numeric keys 2-9 once will enter the respective digit into a data entry field. Pressing these buttons again will enter the first of the letters displayed beside the number. Repeatedly pressing the button will toggle through all of that key's possible choices. When entering text, the 1 button can be used to insert spaces (press twice). To delete a character, press 0 twice.
INFO	Press for context-sensitive help messages, when available.
MENU	Starts the on-screen display. Also functions as the Escape key so you can back out of menus and data entry fields.

Button	Function
F1 - F4	For future use.

Locking/Unlocking the Front Panel

The front panel can be locked or unlocked using the front panel keypad.

Proceed as follows to unlock the front panel using the front panel keypad:

- 1 At the Main Menu, press **SELECT** and then **INFO**. This will unlock the front panel keypad and allow you to make changes to all the operating parameters; however, if the keypad remains untouched for the duration of the set timeout period (default is 60 seconds), the keypad will change back to the Lock state unless you change the keypad state on the Admin Menu. Likewise, you can toggle the keypad lock state back using **SELECT** and **INFO** at any time, provided the KB Lock state on the Admin Menu is Enabled.
- 2 To disable Lock completely, navigate to **Setup, Admin, KB Lock** in the LCD display and press the **SELECT** key.
- 3 Change the **KB Lock** state from **Enabled** to **Disabled**.
- 4 The front panel will now be unlocked, allowing you to change any of the operating parameters.

To lock the front panel, perform the same procedure, except use the right arrow key to change the state. In this case, you will not be prompted to confirm the operation.

Setting Up the IP Parameters of the D9804 MTR

Follow the procedure below when a D9804 MTR is added to or reinserted in the installation.

Proceed as follows to set the IP parameters of the Ethernet port of the D9804 MTR:

- 1 Press the **MENU** key on the front panel of the D9804 MTR.
The **MENU** key toggles between the start up display and the Main Menu.
- 2 From the Main Menu, press the **RIGHT** arrow key to navigate to the Ethernet menu by selecting **Setup**, then **IP**. Press the **SELECT** key. You have now entered the IP menu.
- 3 Go to the required menu item and press **SELECT** to access the IP Address, Mask, and Gateway. Use the right and left arrow keys to navigate the IP sub-menu and if necessary, change any of the values.
Use the right arrow key to navigate to the digits you want to change and press a numeric key to enter a value. Press the **SELECT** key to store the entered value(s).
- 4 If necessary, change the other IP parameters as described in steps 2 and 3 above.

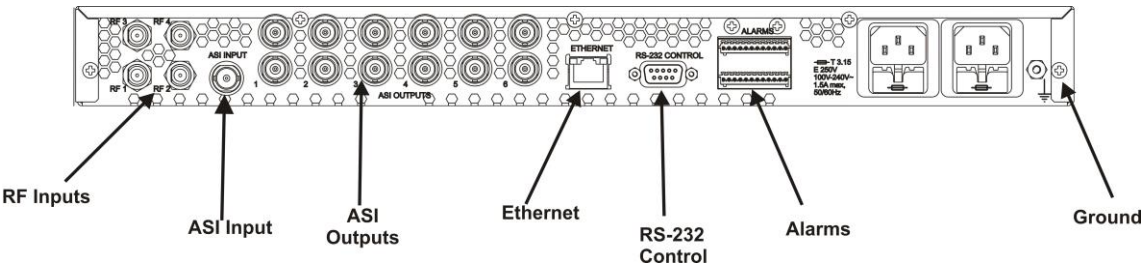
- 5 Press the **MENU** key to exit the IP menu. You are prompted with the following menu options:

Menu Prompts	Description
Save	Saves the changes and returns to the IP menu.
SaveExit	Saves the changes and exits to the main menu.
Exit	Discards the changes and exits to the main menu.
Cancel	Cancels the changes and returns to the IP menu.

Note: When you exit the IP menu, if a problem is detected with the submitted values, parameter errors are displayed. For example, enter 0 for the Mask parameter and the “Netmask is out of range” error message appears when you attempt to exit the menu. In this instance, you need to return to the menu item and enter a valid parameter.

Rear Panel Connections

D9804 Multiple Transport Receiver



Connector	Function	Connector Type
RF Inputs	Each input accepts an LNB signal input. RF1, RF2, and RF3 can provide remote LNB power for use when no external LNB power source is available.	F
ASI Input	Asynchronous Serial Interface Input.	BNC
ASI Outputs	Six sets of two identical Asynchronous Serial Interface Outputs. Although not labeled on the rear panel, the top row is designated 1a to 6a, and the bottom row is designated 1b to 6b.	BNC
Ethernet	For control and management of local and remote D9804 MTR units.	RJ45
Telemetry Data (RS-232 Control)	Telemetry data output: 7 bits, even parity, 1 stop bit, 9600 bps. These parameters are user-configurable via the Telemetry Menu on the front panel.	DB-9
ALARMS	Alarm relays. 7xNO/NC contacts triggered by programmable alarm conditions.	Terminal block
Ground	Stud and nut	Equipotential ground

A

Technical Specifications

Introduction

This appendix provides specifications applicable to your D9804 Multiple Transport Receiver.

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Specifications

Parameter	Specification
System	MPEG-2/DVB® Compatible EN 300 421, EN 300 468 De-modulation: DVB-S QPSK, DVB-S2 QPSK & 8PSK FEC: DVB-S QPSK: Variable (1/2, 2/3, 3/4, 5/6, or 7/8) DVB-S2 QPSK: Variable (1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9 or 9/10) DVB-S2 8PSK: Variable (3/5, 2/3, 3/4, 5/6, 8/9 or 9/10)
Tuner	Symbol Rate Range: DVB-S: 10 to 45 MSymbols/s DVB-S2: 1.0 to 31 Msymbols/s Input Level: -25 dBm to -65 dBm per carrier (> 5Msym) Frequency Range: 950 MHz to 2150 MHz Carrier Capture Range: ±3.0 MHz (1-10 Msym) ±5.0 MHz (10-30 Msym) Satellites: C-band and Ku-band Impedance: 75Ω
Data Outputs	RS-232 telemetry data at rates: 300/1200/2400/4800/9600/19,200/38,400 b/s Ethernet Output for control and monitoring: RJ-45, 10/100BASE-T, up to 10 Mbps
Environmental/Physical	Operating Temperature: 0° – 50°C (32° – 122°F) Storage Temperature: -20° – 70°C (-4° – 158°F) Physical Dimensions: 1.72 in. H x 17.25 in. W x 15.75 in. D (4.37 cm H x 43.82 cm W x 40.0 cm D) Weight: 10 lbs (4.5 kg) approx.

Specifications

Parameter	Specification
Power	Voltage Range: 100 V to 240 VAC Line Frequency: 50/60 Hz Power Consumption: 107 W typical LNB Power on satellite input: +13V/+18V @ 350 mA max. Note: No power supplied to RF # 4

B

Troubleshooting

Introduction

This Appendix provides a product troubleshooting checklist and commonly-asked questions and answers.

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■ Questions and Answers	23

Troubleshooting

If you experience any problems operating your satellite receiver, the following troubleshooting guide may help you resolve your problem.

Note that temporary, solar-related electromagnetic disturbances occur every year during the spring and autumn months. These disturbances usually persist for several minutes a day for approximately one week during this period. When they occur, your service provider should advise you about certain channels that may be adversely affected. If you are unable to resolve your problem after consulting this Troubleshooting checklist, contact your local service provider for assistance, or contact Cisco Customer Support.

Problem	Possible Causes	What to do
No RF Lock.	Incorrect tuning.	Use correct tuning parameters.
No RF Lock.	RF cable disconnected.	Connect or replace cable.
No RF Lock.	LNB voltage incorrect.	Use correct LNB voltage setting.
ASI Output not present.	Connected to wrong ASI output.	Connect to proper output.
ASI Output not present.	Signal source not present.	Connect source.
ASI Output not present.	Wrong source.	Route from correct source input.
ASI Output not present.	Not decombined.	Configure decombining.
ASI Output not present.	Not descrambled.	Configure BISS.
ASI Output rate not correct.	Rate setup is incorrect.	Set up correct rate.
ASI Output rate not correct.	Wrong source.	Connect input to correct source or route from correct source input.

Questions and Answers

The following list of commonly-asked questions with answers may answer some questions or concerns you have about the operation of your satellite receiver.

Questions	Answers
What happens if the receiver is unplugged, or disconnected from AC power?	Your receiver may be deauthorized if not in use for an extended period of time. Contact your dealer/reseller or local service provider to reauthorize your satellite services.
If the system does not appear to be working properly, what can be done?	Follow the troubleshooting tips and suggestions provided in this guide. If the problem persists, contact your local service provider.
Can other programming be received using the same satellite antenna (dish)?	An antenna signal distribution system that includes a signal splitting or bypass feature lets you distribute or receive other satellite signals. To find out if your system includes this capability, contact your antenna installer, or your local service provider.
How do you know which broadcast subscriber services you are authorized to receive?	If you are not authorized to receive broadcast services for particular channels or programs, or if authorized services are temporarily interrupted or changed, an on-screen message is displayed. For more information, contact your local service provider.

C

Customer Information

Introduction

This chapter contains information on obtaining product support.

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Product Support

Cisco provides its customers who have purchased support agreements with telephone support from anywhere in the world. If you require technical telephone assistance or product training support, or if you have any questions concerning the Cisco product, you may contact the appropriate Customer Support Center from those listed below. Charges may apply for customers without a current and applicable product support agreement.

Customers	Location	Phone Number
Programmers and Broadcasters	USA and Canada	Toll-Free: 1.888.949.4786 +1.770.236.4786 dmn_support@cisco.com
Telcos and Cable Service Providers	Cisco Services	Toll-Free: 1.800.722.2009 Local: 770.236.6900 (press 2 at the prompt) customer-service@cisco.com
All Customers	Europe	+32.56.445.155 or +32.56.445.197 saemea-support@cisco.com
All Customers	Asia	+852.2588.4746 saapac-support@cisco.com

Customers who call a Customer Support Center are asked specific questions in order to identify their needs. In this way, each call can be directed to the customer support representative most experienced with their Cisco product. Customer Support Centers also provide the following pre- and post-sales support services for Cisco products.

Training Support

On and off-site training plus technical support services are available for purchase both equipment operators and system administrators.

Warranty and Post-Warranty Support

Warranty and post-warranty support services are available to help customers return Cisco products for service or repair.

Customer Responsibility

When returning equipment, the customer is solely responsible for equipment packaging and transportation costs to the factory.

At the customer's request, Cisco will make reasonable efforts to provide warranty service at the customer's premises, provided that the customer pays current field service rates plus direct travel and accommodation expenses.

In Case of Repair

If your product requires repair, perform following steps:

- 1 Notify Cisco of the problem immediately, providing the model number and serial number of the equipment plus details of the problem. On receipt of this information, service information and shipping instructions will be provided.
- 2 Upon receipt of instructions, return the product by prepaid freight. Refer to *Returning Products* (on page 28).

In Case of a Fault

If your product requires repair, perform the following steps:

- 1 Notify Cisco of the problem immediately, providing the model number and serial number of the equipment plus details of the problem. On receipt of this information, service information and shipping instructions will be provided.
- 2 Upon receipt of instructions, return the product by prepaid freight. Refer to *Returning Products* (on page 28).

Returning Products

Introduction

You must have a return material authorization (RMA) number to return a product. Contact the nearest customer service center and follow their instructions.

Returning a product to Cisco for repair includes the following steps:

- Obtaining a RMA number
- Obtaining a customer service center shipping address
- Packing and shipping the product

Obtaining an RMA Number and Shipping Address

You must have an RMA number to return products.

RMA numbers are valid for 60 days. If you already have a number, but it is older than 60 days, you must contact a customer service representative to revalidate the number. You can return the product after the RMA number is revalidated.

Follow these steps to obtain an RMA number and shipping address.

- 1 Contact a customer service representative to request a new RMA number or revalidate an existing one.
Refer to *Product Support* (on page 26) to find a customer service telephone number in your area.
- 2 Provide the following information to the customer service representative:
 - Product name, model number, part number, serial number (if applicable)
 - Quantity of products to return
 - A reason for returning the product
 - Your company name, contact, telephone number, email address, and fax number
 - Any service contract details
 - Purchase order number of repair disposition authority, if available

Result: The customer service representative issues the RMA number and provides the shipping address.

Note: If you cannot provide a purchase order number:

- A proforma invoice listing all costs incurred will be sent to you at the completion of product repair.

- Customer service must receive a purchase order number within 15 days after you receive the proforma invoice.
 - Products can accrue costs through damage or misuse, or if no problem is found. Products incurring costs will not be returned to you without a valid purchase order number.
- 3 Proceed to **Packing and Shipping the Product**.

Packing and Shipping the Product

Follow these instructions to pack the product and ship it to Cisco.

- 1 Are the product's original container and packing material available?
 - If **yes**, pack the product in the container using the packing material.
 - If **no**, pack the product in a sturdy, corrugated box, and cushion it with packing material.

Important:

You are responsible for delivering the returned product to Cisco safely and undamaged. Shipments damaged due to improper packaging may be refused and returned to you at your expense.

- Do not return any power cords or accessories.
- 2 Write the RMA number on the outside of the container.

Note: Absence of the RMA number may delay processing of product repair and/or result in the equipment being returned unrepaired. Include the RMA number in all correspondence.
 - 3 Ship the product to the address provided by the customer service representative.

Note: Cisco does not accept freight collect. Be sure to prepay and insure all shipments.

FCC Notices

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions supplied in this manual may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to try to correct the interference by one or more of the following measures:

- 1 Reorient or relocate the television receiving antenna.
- 2 Increase the separation between the equipment and the receiver.
- 3 Connect the equipment to an AC outlet on a circuit different from that to which the receiver is connected.
- 4 Contact your dealer/ reseller or an experienced radio/ TV technician for help.

The user may find the booklet "Interference handbook" prepared by the Federal Communications Commission helpful. This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, stock no. 004-000-00450-7.

Shielded cables should be used to interconnect this device with any other/peripheral equipment (i.e., data sources, terminals, monitors, etc.) to ensure compliance with Class B limits. Failure to do so may result in radio or TV interference. Cables should be of braided shield construction with metal end shells

Industry Canada Notice

This digital apparatus does not exceed the limits for Class B radio noise emissions from digital apparatus as set out in the radio interference regulations of the Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques qui dépassant les limites applicables aux appareils numériques de Class B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Declaration of Conformity



DECLARATION OF CONFORMITY with regard to the Directives 2006/95/EC (LVD) and 2004/108/EC (EMC)

Cisco Systems Inc & all its affiliates

Headquarters:
170 West Tasman Drive
San Jose, CA 95134 - USA

Declare under our sole responsibility that the product,

Brand name: Cisco
Model number: D9804
Model name: Multiple Transport Receiver

Fulfills the essential requirements of the Directives 2006/95/EC and 2004/108/EC.

With regard to the Directives 2006/95/EC and 2004/108/EC, the following standards were applied:

Number and Date of Issue	Title of Standard
EN 60950-1:2006 2nd Ed	- Information technology equipment — Safety — Part 1: General requirements
EN 55022:2006, Class B	- Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Devices
EN 55013:2003	- Electromagnetic Compatibility Requirements - Sound and Television Broadcast Receivers and Associated Equipment
EN 55024:1998 +A1:2001 & +A2:2003	- Information technology equipment - Immunity characteristics - Limits and methods of measurement
EN 61000-3-2:2001	- Electromagnetic Compatibility - Part 3: Limits Section 2: Limits for Harmonic Current Emissions (Equipment Input Current less than 16A per phase)

The product carries the CE Mark, which was first affixed in 2008:



Date & Place of Issue: 13 December 2010, Scarborough ON, Canada

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