



**BLONDER  
TONGUE**  
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## INSTRUCTION MANUAL

# CDSR-6198A

Commercial Digital Satellite Receiver

Stock No. 6198A



651192500F

The lightning flash with arrow-head symbol within an equilateral triangle is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



**CAUTION**  
**RISK OF ELECTRIC SHOCK**  
**DO NOT OPEN**



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

**TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER FROM THIS UNIT. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE**

### NOTE TO CATV SYSTEM INSTALLER

This reminder is provided to call the CATV System Installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

We recommend that you write the following information in the spaces provided below. You may need to provide this information if you call DISH Network™ Service Center.

Purchase Location Name:	
Purchase Location Telephone Number	
Receiver Number:	
Receiver Conditional Access Number:	
SmartCard Serial Number:	
FCC Ringer Equivalence Number:	

The information contained herein is subject to change without notice. Revisions may be issued to advise of such changes and/or additions.

Correspondence regarding this publication should be addressed directly to:

Blonder Tongue Laboratories, Inc.  
One Jake Brown Road  
Old Bridge, NJ 08857

Document Number: 651192500

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This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited Pay-Per-View uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

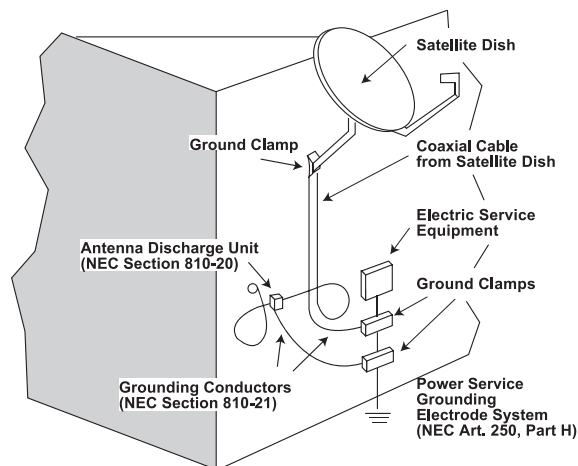
## Safety Instructions

### WARNING!



You should always follow these instructions to help ensure against injury to yourself and damage to your equipment.

- ▶ Read all safety and operating instructions before you operate the receiver.
- ▶ Retain all safety and operating instructions for future reference.
- ▶ Heed all warnings on the receiver and in the safety and operating instructions.
- ▶ Follow all installation, operating, and use instructions.
- ▶ Unplug the receiver from the AC power outlet before cleaning. Use only a damp cloth for cleaning the exterior of the receiver.
- ▶ Do not use accessories or attachments not recommended by Blonder Tongue, as they may cause hazards, and will void the warranty.
- ▶ Do not operate the receiver in high-humidity areas, or expose it to water or moisture.
- ▶ Do not place the receiver on an unstable cart, stand, tripod, bracket, or table. The receiver may fall, causing serious personal injury and damage to the receiver. Install the receiver only in a mounting rack designed for 19" rack-mounted equipment.
- ▶ Do not block or cover slots and openings in the receiver. These are provided for ventilation and protection from overheating. Never place the receiver near or over a radiator or heat register. Do not place the receiver in an enclosure such as a cabinet without proper ventilation. Do not mount equipment in the rack space directly above or below the receiver.
- ▶ Operate the receiver using only the type of power source indicated on the marking label. Unplug the receiver power cord by gripping the plug, not the cord.
- ▶ The receiver is equipped with a three-wire ground-type plug. This plug will fit only into a ground-type power outlet. If you are unable to insert the plug into the outlet, contact an electrician to replace the outlet. Do not defeat the safety purpose of the ground-type plug.
- ▶ Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.
- ▶ Be sure that the outdoor components of the antenna system are grounded in accordance with local, federal, and National Electrical Code (NEC) requirements. Pay special attention to NEC Sections 810 and 820. See the example shown in the following diagram:



- ▶ We strongly recommend using an outlet that contains surge suppression or ground fault protection. For added protection during a lightning storm, or when the receiver is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the lines between the receiver and the antenna. This will prevent damage caused by lightning or power line surges.
- ▶ Do not locate the antenna near overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing the antenna, take extreme care to avoid touching such power lines or circuits, as contact with them can be fatal.
- ▶ Do not overload wall outlets or extension cords, as this can result in a risk of fire or electrical shock.
- ▶ Never insert objects of any kind into the receiver through openings, as the objects may touch dangerous voltage points or short out parts. This could cause fire or electrical shock.
- ▶ Do not attempt to service the receiver yourself, as opening or removing covers (except the SmartCard cover) may expose you to dangerous voltage and will void the warranty. Refer all servicing to authorized service personnel.
- ▶ Unplug the receiver from the wall outlet and refer servicing to authorized service personnel whenever the following occurs:
  - The power supply cord or plug is damaged;
  - Liquid has been spilled, or objects have fallen into the receiver;
  - The receiver has been exposed to rain or water;
  - The receiver has been dropped or the chassis has been damaged;
  - The receiver exhibits a distinct change in performance.
- ▶ When replacement parts are required, ensure that the service technician uses replacement parts specified by Blonder Tongue. Unauthorized substitutions may damage the receiver or cause electrical shock or fire, and will void the warranty.
- ▶ Upon completion of any service or repair to the receiver, ask the service technician to perform safety checks to ensure that the receiver is in proper operating condition.

## Introduction

The commercial digital receiver receives and decodes digital MPEG2 video and audio signals transmitted via the EchoStar group of satellites. For convenience of installation, the chassis fits into a standard 19" wide by 1.75" high rack mount. The receiver rear panel features an industry-standard, coaxial F connector for video output. The rear panel also provides a monaural, high impedance audio output and a 600 Ohm stereo output via the terminal strip.

**THIS RECEIVER IS NOT DESIGNED, APPROVED, NOR WARRANTIED FOR USE IN ANY NON-COMMERCIAL ENVIRONMENT, INCLUDING ANY SINGLE FAMILY RESIDENCE OR ANY OTHER LOCATION, THE PRIMARY PURPOSE OF WHICH IS TO SERVE AS A SINGLE FAMILY RESIDENTIAL DWELLING.**

## Activation and Assistance

For information on installing the receiver, see "Installing the Receiver" on page 8

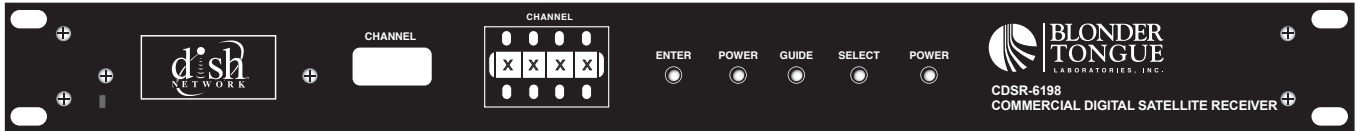
Once you have installed the receiver, call 1-800-454-0843 to activate your account. This will allow viewing of DISH Network™ programming.

If you need assistance, call the DISH Network™ Service Center at 1-800-454-0837.

For information on the warranty, see "Limited Warranty" on page 15.

## The Receiver

### Front Panel



### SmartCard Slot Cover

The receiver comes with the SmartCard already installed. See “Error Messages” on page 12 for more information about the SmartCard.



**The receiver works only with the SmartCard installed. You must use the SmartCard that was authorized for your receiver. The Limited Warranty does not cover replacement of SmartCards that are lost or damaged.**

### Power LED

This LED indicates the receiver is on.

### Channel Selector Switch

The four digit Channel Selector is used to select the channel that one intends to view. When selecting a channel below 1,000, the first (left most) setting must be zero (0). After the channel has been selected one must depress the “ENTER” button. This prompts the receiver to first, read the channel switch bank, and second, tune to the selected channel. Also see Channel Selection on page 8.

### Setting Channels Above 999

At the time of printing, not all 4 digit channels (1,000 and up) are available. Before setting the unit to a channel above 999, please refer to the DISH Network website for currently available channels.

BT recommends that the appropriate channel be marked on the front panel in the white area adjacent to the channel selector switch. This provides an easy reference should someone accidentally mis-set the channel selector.

Note: An accidentally mis-set channel selector will not immediately cause the receiver to tune to the mis-set channel unless the “ENTER” button is depressed. However, a mis-set channel selector will cause the receiver to automatically tune to the mis-set channel following a power failure.

### Front Panel Switches

#### Switch 1 ENTER

Press the ‘ENTER’ button to enter a channel selected by the channel selector switch.

#### Switch 2 POWER

Press the ‘POWER’ button once to place the receiver in the standby mode. Press the ‘POWER’ button a second time to recover from standby mode.

Note: Cycling power via the ‘POWER’ button does not prompt the receiver to “read” the channel selector switch. The following sequence illustrates this point. Set the receiver to channel 102 and press enter. Change the channel selector to 202 and cycle the power via the ‘POWER’ button. Notice that the receiver returns to 102 (not 202). The ‘ENTER’ button must be pressed to prompt the receiver to read the channel selector switch and tune to the channel selector (In this example 202).

## Guide/Select Modes

As described in Start-Up Information on page 7, the guide and select buttons are generally used in conjunction with a display(TV or video monitor).

### Switch 3 GUIDE

The 'GUIDE' button is used to view the program guide. The program guide is useful for choosing the desired channel. However, the channel selector switch and 'ENTER' button must be used to select the desired channel. The selected channel will be highlighted on the screen. Push the 'SELECT' switch to exit the program guide mode.

### Switch 4 SELECT

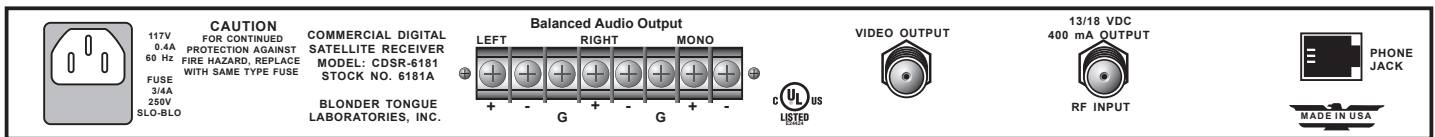
Press the 'SELECT' button to select the highlighted channel and automatically exit the program guide mode.



**One must be careful when using the guide and select buttons. Once the set-up is complete, please ensure that the channel on which the receiver is operating matches the channel selector switch.**

Note: If the channel selector switch is set to an unauthorized channel, the 'GUIDE' button can be used to view the program guide and then the channel selector switch and the 'SELECT' button can be used to choose an authorized channel.

## Back Panel



### Power Entry

The 6198A operates over the range of 85 to 135 VAC, 50/60 Hz. The power entry receptacle is a polarized, 3-pin, IEC-320 series connector containing a fuse. The fuse type used is 0.75A,250V slow-blow (5 x 20 mm size).

### Audio Output

The screw terminal strip provides single stereo, 600 Ohm, unbalanced Left and Right audio outputs. It also provides monaural audio on the same terminal strip.

### Video Output

This female "F" connector provides a single 75 Ohm, video output.

### RF Input

This female "F" connector receives an IF signal, 950 - 1450 MHz RF input from the LNB and provides power for the LNB.

### Telephone Jack

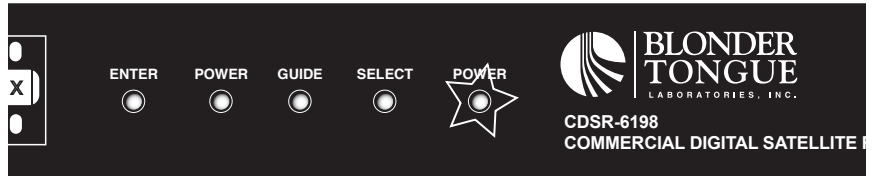
The RJ-11 connector is intended for future use.

## Using the Receiver

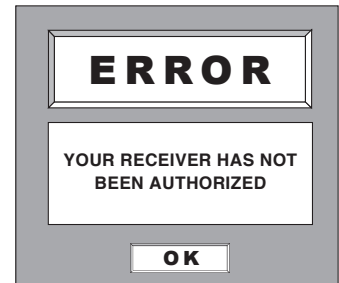
### Start-up Information

Before beginning the start-up procedure, the receiver must be connected to a satellite antenna LNB output. When one plugs the receiver power cord into an outlet, the receiver will automatically turn on. Generally, one of two methods is used to verify that the receiver is operating properly: either (1) connect an audio/video monitor to the audio and video outputs, or (2) if the receiver is connected to a modulator in a headend, one may connect a TV to the headend output and tune to the appropriate channel.

- 1) Verify Green LED is ON, if not, push the 'POWER' button located in front panel and verify that the POWER LED is ON.



- 2) Verify the screen to the right is displayed if receiver has not been authorized.
- 3) Press 'SELECT' switch to exit the message.
- 4) Verify that the channel selector switch is set to Channel 100. Press 'ENTER'.
- 5) Channel 100 (Preview Channel) should now be displayed on the screen.



### Receiver Authorization

#### To authorize the receiver, contact EchoStar® Commercial group.

The Receiver Control Access ID and Smart Card Control Access ID numbers are required to authorize the receiver. This information can be accessed by either (1) removing the Smart Card while the receiver is powered and connected to a display, or (2) if the receiver is not connected, a label with the information can be found on the side of the unit.

Info  
Menu  
Title

**Important System Information**

**Model ID:** 1000  
**Receiver CA ID:** R\*\*\*\*\* \*\*  
**Smart Card CA ID:** S\*\*\*\*\* \*\*  
DNASP002 Rev052  
**Software Version:** AAA1BAAA-F  
**Boot Strap Version:** 100BBAAA  
**Customer Service:** 1-800-333-DISH (3474)  
**Internet Address:** <http://www.dishnetwork.com>

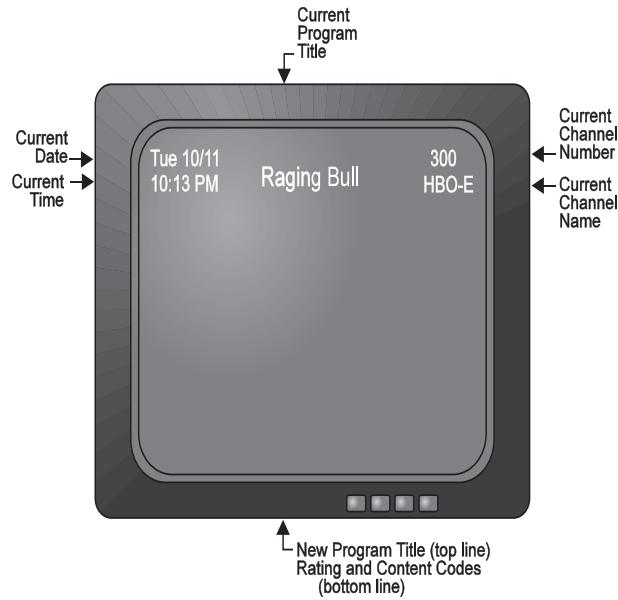
Smart Card  
Conditional Access  
Number

Access to  
Assist

Copyright © 1996, EchoStar Communications Corporation. All Rights Reserved. OK

## Channel Selection

To change channels, simply select the desired channel using the channel selector switch. Select channel 300; for example, then press the 'ENTER' switch. You should see channel 300 on the top right of the display.



## Installing the Receiver

### Installation Requirements

#### Mounting

The receiver is 1.75 inches tall, 19.00 inches wide, and 14.5 inches deep. You can mount it in a standard rack or on any type of shelf that allows air flow in through the ventilation slots.

#### Power

60 Hz, 110 VAC

#### WARNING!



**For safe and reliable operation, the receiver requires a proper ground connection for the third prong of the receiver power cord plug.**

### Installing the Receiver in a Rack

You can mount the receiver in a standard EIA, 24 inch (610 mm) deep, enclosed rack. Secure the receiver front panel to the rack by inserting four machine screws, with cup washers, through the four mounting holes in the front panel.

#### ATTENTION!



**We recommend that you support the receiver by some means in addition to the front panel screws. You can use rear rail support brackets or rack slides. Rear rail support brackets are available from BT at a nominal cost. Order PN 622280100A.**



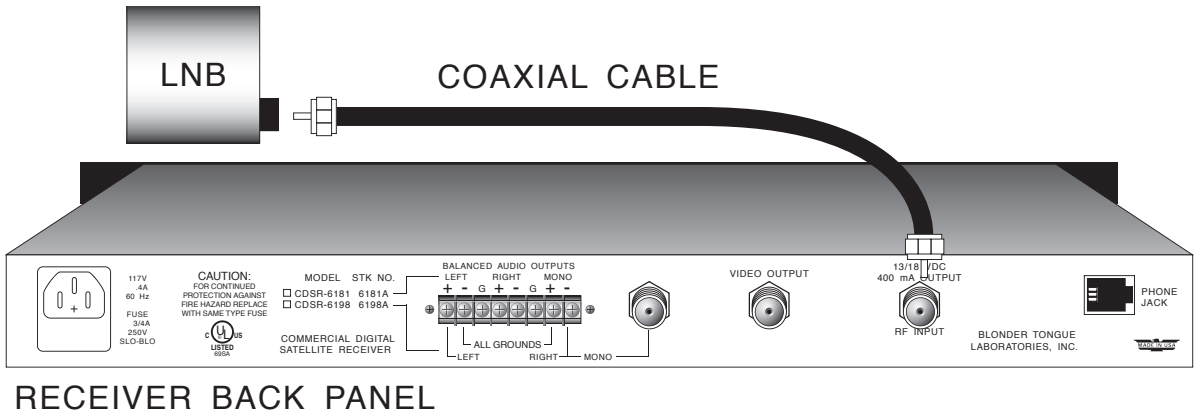
## Connecting the Receiver to Your System

### Single Versus Dual Output LNB

A single-output LNB can support a single receiver, or multiple receivers all tuned to the same polarity group of channels.

▶ If you use a single receiver:

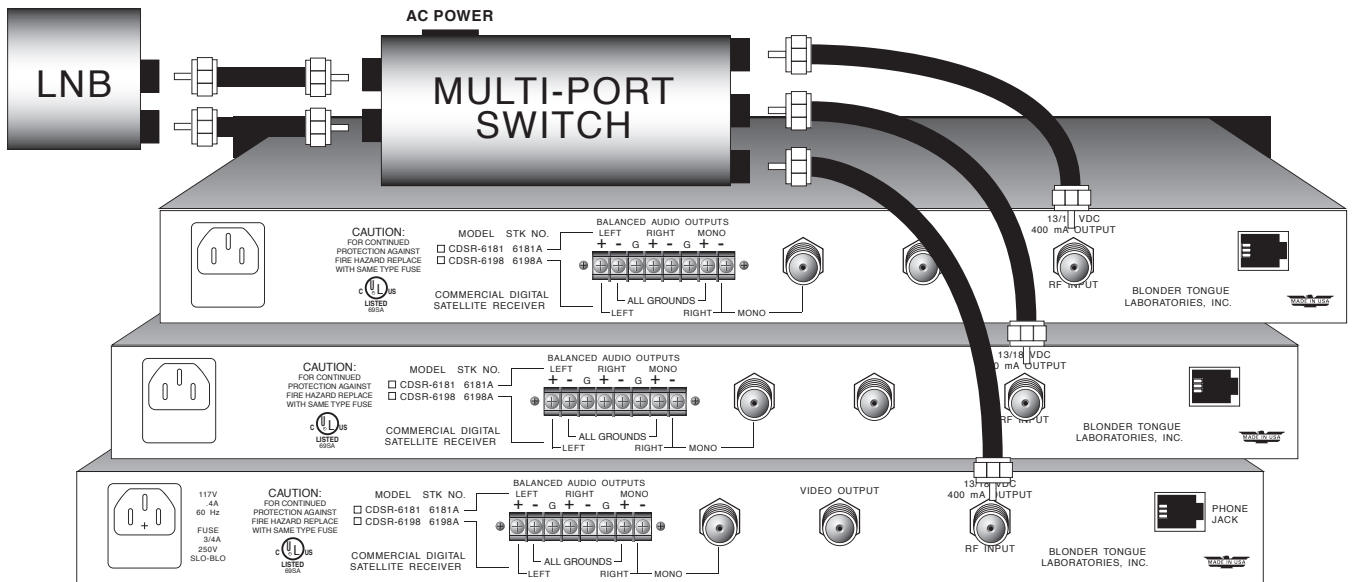
Route the LNB coaxial cable to the **RF Input** on the receiver back panel.



A dual output LNB can support multiple receivers, all tuned to different channels; or two groups of receivers, where the receivers in a group all have the same polarity group of channels available to them.

▶ If you want all the receivers to be independently tunable:

Route the LNB coaxial cables to a voltage-controlled, multi-port switch. Route a coaxial cable from a switch output to the **RF Input** on the back panel of each of the receivers.

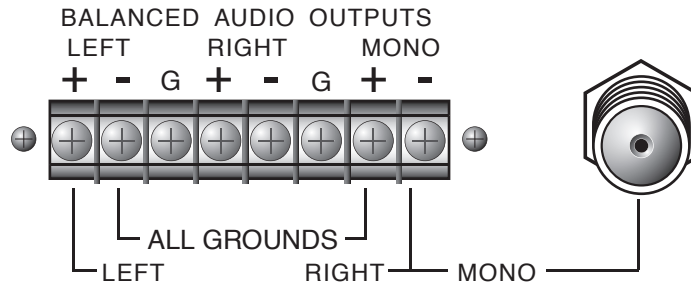


## Audio Connections

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Note: If you use multiple receivers, the following instructions apply to each receiver.

- ▶ For unbalanced monaural (left and right combined) audio (10,000 Ohm impedance):  
Route one wire from the receiver back panel Terminal Strip to the RF modulator audio input.
- ▶ For unbalanced stereo audio (600 Ohm impedance):  
Route one wire from the left terminal, one wire from the right terminal, and two wires from any ground terminal of the receiver back panel Audio Output screw terminal strip to the corresponding connections on an RF modulator or to a stereo encoder.



## Video Connections

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Note: If you use multiple receivers, the following instructions apply to each receiver.

- ▶ For connecting to an RF modulator:  
Route a coaxial cable from the receiver back panel Video Output to the RF modulator video input.

## Staying Legal

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Title 47, Section 605(e)4, United States Code (U.S.C.) makes it a federal crime to modify this receiver to enable it to receive encrypted (scrambled) television programming without payment of required subscriptions. Conviction can result in a fine of up to \$500,000 and imprisonment for five years, or both. Any owner of this receiver who procures or willfully causes its modification is an accessory to that offense and may be punishable in the same manner. Investigative authority for violations lies with the Federal Bureau of Investigation (FBI).

## FCC Compliance

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ATTENTION!



**The following text is extracted from FCC regulations as of the publication date of this Guide. Contact the FCC or your local library for the complete text of the regulations.**

This equipment complies with Part 68 of the FCC rules. On the rear panel of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

### **The REN for this product is 0.0B.**

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). The commercial receiver does not affect the sum of RENs. To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

### **This equipment uses the following USOC (Universal Service Order Code) jacks: RJ-11C.**

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. This equipment cannot be used on telephone company-provided coin service. Connection to Party Line Service is subject to state tariffs.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

- ◆ Move or realign the antenna or receiving device, such as your broadcast TV antenna.
- ◆ Increase the distance between the receiver and the equipment with the interference. Change the angle of the receiver relative to the equipment.
- ◆ Plug the receiver into a different power outlet, preferably on a different fuse circuit within your building.
- ◆ This equipment is hearing-aid compatible.

It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damage to the equipment caused by local lightning strikes and other electrical surges.

## Error Messages

Note: A major error message indicates a condition that you must correct to allow the receiver to operate. When the receiver displays such a message, you will not have access to any menu until you have corrected the condition. A minor error message indicates a condition that may degrade, but will not prevent receiver operation. Please contact Blonder Tongue customer service for any questions. Please note TV must be connected to the receiver to display all these messages.

### Major Error Messages

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#### ◆ INVALID SMARTCARD

The receiver displays this message when a SmartCard not authorized for use with the receiver is inserted. Insert the proper SmartCard.

#### ◆ SMARTCARD NOT INSERTED

The receiver displays this message when no SmartCard is inserted. Insert the proper SmartCard.

#### ◆ SMARTCARD NOT INSERTED CORRECTLY

The receiver displays this message when the SmartCard is inserted upside-down or backwards. Insert the SmartCard with the arrow up, pointing toward the receiver.

### Minor Error Messages

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#### ◆ PROGRAM BLACKED OUT

The receiver displays this message when a program (for example, a sports event) cannot be viewed in your geographic location. The receiver will go back to its previous state after the event is over.

#### ◆ SMARTCARD NOT AUTHORIZED

The receiver displays this message when the receiver has not yet been authorized. Call 1-800-454-0843 to authorize the receiver.

#### ◆ NO ACCESS RIGHTS

The receiver displays this message when the stream of authorization signals has been interrupted. Call 1-800-454-0837 for assistance.

#### ◆ ACQUIRING SIGNAL

This message is normal for a few seconds during the initial power up. However, if the message should remain, the DISH Network™ satellite signal cannot be acquired, such as when the satellite antenna cable is disconnected or the LNB is not working properly. Check the cable and the LNB.

#### ◆ LOST SIGNAL

The receiver displays this message when the DISH Network™ satellite signal has been lost. This condition may occur during rain fade or bad weather. Check the signal strength.

#### ◆ PAY-PER-VIEW CHANNEL

The receiver displays this message when you try to tune to an unauthorized Pay-Per-View channel. Use the guide menu to navigate to the authorized channel and press Select.

#### ◆ SUBSCRIPTION CHANNEL

The receiver displays this message when you try to tune the receiver to a subscription channel to which you have not subscribed. To subscribe to the channel, call 1-800-454-0843.

## Specifications

### System Specification

TV System: NTSC  
 Input Symbol Rate: 18-22 Msps  
 Modulation: QPSK  
 Inner FEC: Convolutional Rate 1/2, 3/4, 2/3, 5/6, 7/8  
 Outer FEC: Reed Solomon Coding (204,188)  $t=8$   
 Demultiplexing: ISO/IEC 13818-1  
 Video Decoding: ISO/IEC 13818-2 (MP-ML)  
 Video Resolution:  
   704 pixels x 480 lines x 30 frames/sec  
   480 Pixels x 480 Lines x 30 Frames/sec  
   352 Pixels x 480 Lines x 30 Frames/sec  
   352 Pixels x 240 Lines x 30 Frames/sec  
 Audio Decoding: MPEG 1, layer 1 and 2

### Physical

Dimensions:  
   19.00" x 14.5" x 1.75" (max)  
   482.6 mm x 368.3 mm x 44.4mm  
 Operating Temperature: 32 to 122°F (0 to 50°C)  
 Storage Temperature: -4 to 158°F (-20 to 70°C)  
 Humidity: 0 to 90% RH (non-condensing)  
 Color: Black Front Panel; Natural Steel Finish Chassis  
 Mounting: Standard 1 Unit High 19" (482.6 mm)  
 Rack Mount

### Features

Security System: SmartCard Receptacle (ISO 7816 Compatible)  
 Front Panel Control:  
   4 Button, Interactive Selection Push Wheel Switch for Channel Selection

### Tuner

Input Frequency Range: 950 to 1450 MHz  
 Input Impedance: 75 Ohm  
 Connector Type: F-type female  
 Input level: -70 dBm to -30 dBm (Per Carrier)  
 Input VSWR: 2.0:1 (max)  
 LO Leakage at Input: -60 dBm (typ), -50 dBm (max)  
 IF Band Width:  
   32.0 MHz at -3 dB  
   42.0 MHz at -20 dB

Group Delay: 8.0 nsec (p-p) Ripple (typ)  
 Channel Selection: PLL Frequency Synthesizer (I2C)  
 Frequency Step Size: 125 KHz

### Power Supply

Input Voltage: 110 +/- 22% VAC single phase  
 Voltage Frequency: 60 Hz +/- 10 Hz  
 Power Entry:  
   Polarized 3-pin IEC-320 Series Fused Receptacle  
 Protection: Externally and Internally Fused

### LNB Power Supply

RHCP Polarity Switching: +13.3 Volts  $\pm$  7%  
 LHCP Polarity Switching: +18.3 Volts  $\pm$  7%  
 Current: 400 mA (max)  
 Protection: Lightning, Short Circuit

### Composite Video Output

Composite Video:  
   NTSC, Reconstructed from CCIR-656 Video Data  
 Connector: "F" Female  
 Level: 1.0 V (p-p)  $\pm$  7% into 75 Ohm  
 Frequency Response:  
    $\pm$  1 dB: 20 Hz to 3.58 MHz  
    $\pm$  2 dB: 20 Hz to 4.2 MHz  
 Differential Gain: < 5%  
 Differential Phase: < 5°  
 Luma Delay: < 50 nS  
 Line Time Distortion: < 1.5% TILT  
 Field Time Distortion: < 1.5% TILT  
 S/N Ratio: > 50 dB (weighted)

### Audio Output

Number of Channels: Two Standard (L & R)  
 Operating Modes: Stereo, Monaural  
 Impedance: Left & Right Unbalanced 600 Ohm;  
 Monaural unbalanced 10K Ohm  
 Output Level:  
   Left & Right 0 dBm (2.2 V [p-p]) Into 600 Ohm Balanced Load; Monaural 1 V [p-p] Into 10K Ohm Load  
 Output Connectors:  
   Terminal Strip (Left, Right, Monaural)

## Specifications - continued

Frequency Response: 20 Hz to 20 KHz  $\pm$  1 dB

Total Harmonic Distortion: < 0.1% at 1 KHz

Dynamic Range: 90 dB

Left/Right Balance: < 0.8 dB

Left/Right Separation: > 50 dB

S/N Ratio: 80 dB

Sampling/Resolution: 256X over-sampled/16 bits

### Internal Modem

Baud Rate: 2400 (max)

Signal Forma:

Compatible With V.22bis (2400), V.22 (1200),  
Bell 212A (1200), Bell 103 (300)

Connector: RJ-11

Instruction Set: Compatible with Hayes Command Set

Auto-dialer Type:

Both Pulse and DTMF Dialers to be Provided

Signal to Noise Performance:

Error Rate > 0.00011 for S/N > 14 dB

Active Circuit Isolation:

600 Ohm Isolation Transformer, 1500 VDC Primary  
to Secondary Isolation. Off-hook Relay Must Provide  
1500 VDC Contact to Coil Isolation

Surge Suppression:

FCC Part 68 Metallic surge: 800 V peak at 10 usec  
max. rise time. 560 usec min. decay time to half  
crest. Longitudinal surge: 1500 V peak between tip  
and ring to ground. 10 usec max. rise time, 160  
usec min. decay time to half crest.

Line interfacing:

FCC Part 68 On-hook leakage tip-to-ring greater  
than 5M Ohm with applied voltage of less than 100  
V. Longitudinal Balance: 60 dB, 200 to 1000 Hz,  
40 dB, 1000 to 4000 Hz Off-hook detect Modem  
automatically ceases communication and releases  
telephone line if a second telephone is connected  
to the same line as detected off-hook

### Agency Approvals

Modem: FCC Part 68

Safety: UL Listed 1419

## Returning Product for Repair (or Credit)

A Return Material Authorization (RMA) Number is required on all products returned to Blonder Tongue, regardless if the product is being returned for repair or credit. Before returning product, please contact the Blonder Tongue Service Department at 1-800-523-6049, Ext. 4256 or visit our website: [www.blondertongue.com](http://www.blondertongue.com) for further information.

# Limited Warranty

Blonder Tongue Laboratories, Inc. (BT) will at its sole option, either repair or replace (with a new or factory reconditioned product, as BT may determine) any product manufactured by BT which proves to be defective in materials or workmanship or fails to meet the specifications which are in effect on the date of shipment or such other specifications as may have been expressly agreed upon in writing (i) for a period of one (1) year from the date of original purchase (or such shorter period of time as may be set forth in the license agreement specific to the particular software being licensed), with respect to iCentral™ (hardware and software) and all other software products (including embedded software) licensed from BT, (ii) for a period of one (1) year from the date of original purchase, with respect to all MegaPort, IPTV products and fiber optics receivers, transmitters, couplers and integrated receivers/distribution amplifiers (including TRAILBLAZER™, RETRO-LINX™ and TWIN STAR™ products) as well as for VideoCipher® & DigiCipher® satellite receivers, and (iii) for a period of three (3) years from the date of original purchase, with respect to all other BT products. Notwithstanding the foregoing, in some cases, the warranty on certain proprietary sub-assembly modules manufactured by third party vendors and contained in BT products and on certain private-label products manufactured by third parties for resale by BT are of shorter duration or otherwise more limited than the standard BT limited warranty. In such cases, BT's warranty with respect to such third party proprietary sub-assembly modules and private-label products will be limited to the duration and other terms of such third party vendor's warranty. In addition, certain products, that are not manufactured but are resold by BT, carry the original OEM warranty for that product. The limited warranty set forth in this paragraph does not apply to any product sold by BT, which at the time of sale constituted a Closeout Product.

BT will at its sole option, either repair or replace (with a new or factory reconditioned product, as BT may determine) any product sold by BT which at the time of sale constituted a refurbished or closeout items ("Refurbished Product" and "Closeout Product"), which proves to be defective in materials or workmanship or fails to meet the specifications which are in effect on the date of shipment or such other specifications as may have been expressly agreed upon in writing, for a period of ninety (90) days from the date of original purchase. Notwithstanding the foregoing, in some cases, the warranty on third party software and on certain proprietary sub-assembly modules manufactured by third party vendors and contained in BT products and on certain private-label products manufactured by third parties for resale by BT are of shorter duration or otherwise more limited than the BT limited warranty for Closeout Products. In such cases, BT's warranty for Closeout Products constituting such third party software, third party proprietary sub-assembly modules and private-label products will be limited to the duration and other terms of such third party vendor's warranty. In addition, notwithstanding the foregoing, (i) certain Closeout Products that are not manufactured (but are resold) by BT, carry the original OEM warranty for such products, which may be longer or shorter than the BT limited warranty for Refurbished or Closeout Products. All sales of Refurbished or Closeout Products are final.

To obtain service under this warranty, the defective product, together with a copy of the sales receipt or other satisfactory proof of purchase and a brief description of the defect, must be shipped freight prepaid to: Blonder Tongue Laboratories, Inc., One Jake Brown Road, Old Bridge, New Jersey 08857.

This warranty does not cover damage resulting from (i) use or installation other than in strict accordance with manufacturer's written instructions, (ii) disassembly or repair by someone other than the manufacturer or a manufacturer-authorized repair center, (iii) misuse, misapplication or abuse, (iv) alteration, (v) lack of reasonable care or (vi) wind, ice, snow, rain, lightning, or any other weather conditions or acts of God.

**OTHER THAN THE WARRANTIES SET FORTH ABOVE, BT MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND, EXPRESS OR IMPLIED, AS TO THE CONDITION, DESCRIPTION, FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY OR AS TO ANY OTHER MATTER, AND SUCH WARRANTIES SUPERSEDE ANY ORAL OR WRITTEN WARRANTIES OR REPRESENTATIONS MADE OR IMPLIED BY BT OR BY ANY OF BT'S EMPLOYEES OR REPRESENTATIVES, OR IN ANY OF BT'S BROCHURES, MANUALS, CATALOGS, LITERATURE OR OTHER MATERIALS. IN ALL CASES, BUYER'S SOLE AND EXCLUSIVE REMEDY AND BT'S SOLE OBLIGATION FOR ANY BREACH OF THE WARRANTIES CONTAINED HEREIN SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT F.O.B. SHIPPING POINT, AS BT IN ITS SOLE DISCRETION SHALL DETERMINE. BT SHALL IN NO EVENT AND UNDER NO CIRCUMSTANCES BE LIABLE OR RESPONSIBLE FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, PUNITIVE, DIRECT OR SPECIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT LIABILITY OR OTHERWISE OR ANY OTHER LEGAL THEORY ARISING DIRECTLY OR INDIRECTLY FROM THE SALE, USE, INSTALLATION OR FAILURE OF ANY PRODUCT ACQUIRED BY BUYER FROM BT.**

All claims for shortages, defects and non-conforming goods must be made by Buyer in writing within five (5) days of receipt of merchandise, which writing shall state with particularity all material facts, concerning the claim then known to Buyer. Upon any such complaint, Buyer shall hold the goods complained of intact and duly protected, for a period of up to sixty (60) days. Upon the request of BT, Buyer shall ship such allegedly nonconforming or defective goods, freight prepaid to BT for examination by BT's inspection department and verification of the defect. BT, at its option, will either repair, replace or issue a credit for products determined to be defective. BT's liability and responsibility for defective products is specifically limited to the defective item or to credit towards the original billing. All such replacements by BT shall be made free of charge f.o.b. the delivery point called for in the original order. Products for which replacement has been made under the provisions of this clause shall become the property of BT. Under no circumstances are products to be returned to BT without BT's prior written authorization. BT reserves the right to scrap any unauthorized returns on a no-credit basis. Any actions for breach of this contract must be commenced by Buyer within thirteen (13) months after the cause of action has accrued. A copy of BT's standard terms and conditions of sale, including the limited warranty, is available from BT upon request. Copies of the limited warranties covering third party proprietary sub-assembly modules and private label products manufactured by third parties are also available from BT on request. VideoCipher® & DigiCipher® are registered trademarks of Motorola Corp.



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