

# PowerVu<sup>®</sup> Network Receiver

## Model D9838

### Installation and Operation Guide



**Please read this entire guide**

**Veuillez 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**

Veuillez 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.

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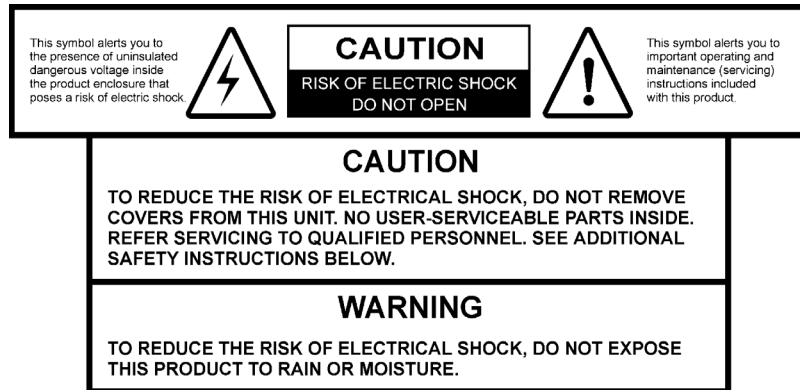
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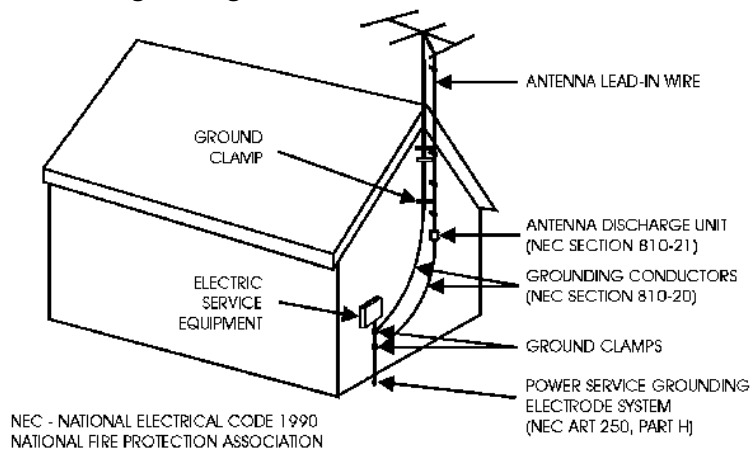
1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.

PORTABLE CART WARNING



12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.

17. The mains plug of the power supply cord shall remain readily operable.
18. **Damage Requiring Service:** Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a) When the power-supply cord or plug is damaged.
  - b) If liquid has been spilled, or objects have fallen into the product.
  - c) If the product has been exposed to rain or water.
  - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of the controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
  - e) If the product has been dropped or damaged in any way.
  - f) The product exhibits a distinct change in performance.
19. **Replacement Parts:** When replacement parts are required, be sure the service technician uses replacement parts specified by Scientific-Atlanta, or parts having the same operating characteristics as the original parts. Unauthorized part substitutions made may result in fire, electric shock or other hazards.
20. **Safety Check:** Upon completion of any service or repairs made to this product, ask the service technician to perform safety checks to determine that the product is in safe operating condition.
21. **Outdoor Antenna Grounding:** If an outside antenna or cable system is connected to this product, ensure that the antenna or cable system is properly grounded to provide protection against voltage surges and built-up static charges. Appropriate sections of the National Electrical Code (NFPA 1990) provide information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



TO CATV SYSTEM INSTALLER  
 This reminder is provided to call the CATV system installer's attention to Article 820-40 of the National Electrical Code (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 entry as practical.

Figure 1. Outdoor antenna grounding





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

## Power

Important! This product is Protection Class II.

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 back panel of this product. 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 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 dommages 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 II.

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

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.
- 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 Schutzklasse II.

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

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 producto de Clase II.

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

Tire siempre del enchufe o del conector para desconectar un cable. Nunca tire del cable mismo.

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 protezione Classe II.

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

Protegete 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

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 autoizzato dalla fabbrica.

# Important Notice for Customers in the United Kingdom

## Class II Apparatus Using a Two-Wire Power Cord

**Important!** The wires in this mains lead are coloured in accordance with the following code.

Colour	Mains lead wire
Blue	Neutral
Brown	Live

As the colour of the wires in the mains lead of this apparatus may not correspond with coloured markings identifying the terminal in your apparatus, proceed as follows:

If wire colour is	Connect it to...
Blue	Neutral terminal. Note: The Neutral terminal is typically marked N or coloured black.
Brown	Live terminal. Note: The Live terminal is typically marked L or coloured red.



**WARNING!** Do not connect the blue or brown wires to the earth terminal of a three-pin plug.

**Note:** The earth terminal is distinguished by its colour (green, or green-yellow), or by being marked with the letter E, or marked with the safety earth symbol:

# Warranty and Disclaimer

## Statement

Scientific-Atlanta warrants good title to any hardware furnished by it. For software, we warrant that we have the right to grant any software license granted. We warrant during the Warranty Period as defined below that services will be performed in a good and workmanlike manner. We also warrant that during the Warranty Period, each item we deliver (other than separately licensed software and services) (an "Item") will be free from material defects in workmanship and materials and under ordinary use, conform in all material respects to its published specifications current at the time the Item was shipped. Items may include refurbished goods, subassemblies or components which we warrant as provided in this section.

## Warranty period

The Warranty Period begins on the date the Item is delivered and extends for 12 months for hardware and 90 days for software, parts and services. We will repair or replace, at our option, any product returned to us by the purchaser of such Item at the purchaser's expense during the Warranty Period, which fails to satisfy this Warranty, unless the failure was the result of shipping; improper installation, maintenance or use; abnormal conditions of operation; attempted modification or repair by the purchaser; or an act of God. We will reperform any services which do not conform to this Warranty provided we have received notice of non-conformance within the Warranty Period.

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## Purchaser's responsibility

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## Claims under this warranty

In case of a claim under this warranty, the purchaser should do the following:

1. Notify us by giving the Item model number, serial number and details of the difficulty.
2. On receipt of this information, the purchaser will be given service data or shipping instructions.
3. On receipt of shipping instructions, forward the Item prepaid.
4. If the Item or fault is not covered by warranty, an estimate of charges will be furnished before work begins.
5. Limitation of liability.

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An executable form of the Alo source code (version 0.4) is distributed with the D9838 Network Receiver under the Mozilla Public License (MPL) Version 1.1. The Alo source code is available at <http://alo.sourceforge.net/>.

### Scientific-Atlanta Patents

4,866,770; 4,885,775; 5,029,207; 5,237,610; 5,270,809; 5,341,425; 5,381,481; 5,418,782; 5,420,866; 5,425,101; 5,493,339; 5,506,904; 5,930,515.

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# CHAPTER 1

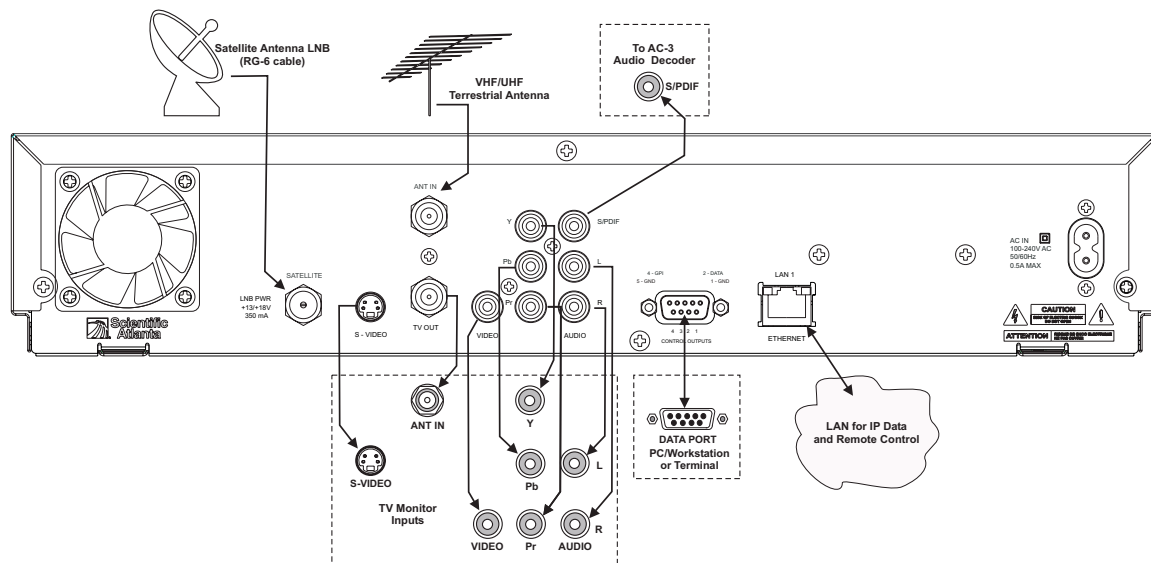
## Quick Setup

This chapter describes how to set up the D9838 Network Receiver for typical operation. To set up the receiver, complete the following procedures:

1. Install the receiver.
2. Acquire a signal.

### Step 1: Installing the receiver

To install the receiver, connect the appropriate cables to the rear of the receiver as illustrated in the following diagram:



## Step 2: Acquiring a signal

After you have installed the receiver, you can acquire a signal. You can acquire a signal in one of two ways:

- If the receiver is preset to acquire a signal, you can acquire the signal by selecting a factory-configured network preset.
- If the receiver has not been preset to acquire a signal, you can acquire the signal manually by configuring the signal settings.

### Acquiring a signal using a preset

When you have completed the cable connections to a receiver that is delivered with factory-configured presets and applied power, the unit will complete the software boot sequence. This takes about two minutes. The boot sequence is completed when the monitor displays the default preset program.

Your receiver likely includes a Factory Presets insert document for your organization that lists the factory-configured presets. Refer to this document when you want to acquire a signal using a new preset.

#### To acquire a signal using a factory-configured preset:

1. Select Menu > Settings Menu > Satellite > Tuning.

Active Tuning Settings					
Network					
Frequency	3.7	GHz	LO Select	LO1	▼
Sym Rate	30.8	MS/s	LO Freq 1	5.15	GHz
FEC	AUTO	▼	LO Freq 2	0.0	GHz
Polarity	Horiz	▼	Crossover	0.0	GHz
Net ID	1		LNB Power	Off	▼
			Signal Lock	Yes	
Audio Tone	Disable	▼	Signal Level	44	
<div>Presets... OK Cancel</div>					

2. Select **Presets** and choose **SELECT**. A menu similar to that shown below will be displayed. The Preset menu displays the name of the preset at the bottom of the screen as you navigate through the menu.

Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Horiz	1
2	11.35	21.0	AUTO	Horiz	1
3	3.449	28.3465	AUTO	Horiz	0
4	3.449	28.3465	AUTO	Horiz	0
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0



3. Navigate to the Preset you want to use and press the right arrow (▶) to display the flyout menu. Select **Copy to Active** and then press **SELECT**.

Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Horiz	1
2	11.35	21.0	AUTO	Horiz	1
3	3.449	28.3465	AUTO	Horiz	0
4	3.449	28.3465	AUTO	Horiz	0
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0

Copy To Active  
Edit...  
Copy From Active  
Copy To Preset...

When the system reports that it has acquired the network, it displays a dialog box that prompts you to save the preset.

- If you select YES, the system will save the preset as the active preset, and display the preset program on the TV monitor.
- If you select NO, the system will save the preset configuration, and display the currently active preset program on the TV monitor.

**Note:** If the screen displays the Not Authorized message after the boot sequence or when you attempt to activate a different preset, this indicates that the receiver has successfully acquired the preset signal configuration, but is not authorized to receive the signal. You will need to contact your signal provider.

## Acquiring a signal by configuring the LNB settings

When you have completed the cable connections to a receiver that is delivered with no factory-configured presets and applied power, the unit will complete the software boot sequence.

The boot sequence is completed when the monitor displays the No Signal message. The Signal LED on the front panel of the receiver will flash to indicate that the receiver has not acquired a signal. You can now configure the receiver to acquire a signal.

### To acquire a signal using the manual procedure:

1. Select Menu > Settings > Satellite > Tuning.
2. Configure the signal frequency and LNB settings. (For a complete description of the menu options, see Tuning on page 47).
3. The system prompts you to save the settings. Press **YES**.
4. Press **MENU**.



# CHAPTER 2

## Product Description

Welcome to the PowerVu® Model D9838 Network Receiver. We trust that you will find that this product is simple to operate and delivers outstanding performance.

This chapter provides a detailed description of the features and design of the network receiver.

### Product overview

The PowerVu® Model D9838 Network Receiver is designed for real-time and non-real-time satellite content distribution for organizations in business TV, private network and SMATV environments.

The receiver can decode digitally encrypted video, audio, and data, and playback can be controlled locally or by the uplink, depending on the system configuration and implementation.

The integrated hard disk drive can record live video for playback at a later time. Data files and PC media files can also be stored on the hard drive for access by network devices on demand.

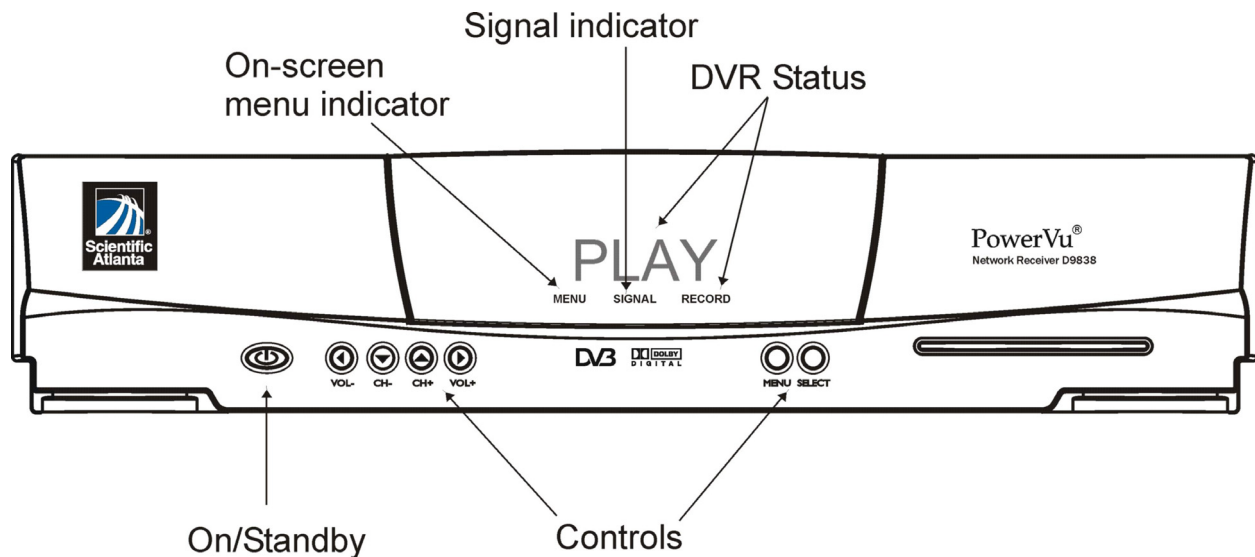
### Key features

- Variable QPSK symbol rates from 1 to 45 Msymbols/s
- PowerVu conditional access with DES/DVB de-scrambling
- 4:2:0 NTSC/PAL (B/G/I/D/M/N) video decoding
- MPEG or Dolby® Digital (AC-3) audio decoding
- Baseband video outputs via composite, component (YPbPr) and S-video
- RF modulated output for TV connection
- One unbalanced stereo pair of audio outputs
- S/PDIF audio output
- Internal Hard Drive storage (160 GB)
- RS-232 Asynchronous data
- Fingerprint Trigger
- Field upgradeable software and security
- 64 user-editable preset configurations
- Lock levels for restricted access to configuration
- Line 21 closed caption and V-chip support
- DVB Subtitling
- Imitext™ Subtitling
- PowerVu VBI (including NABTS, Teletext, VITC)
- DVB VBI (Teletext, WSS, VPS)
- Web browser interface

- SNMP control
- MPE IP data processing at rates up to 15 Mbps, including up to 5 Mbps delivered via zBand™
- File access via CIFS (Common Internet File System) and FTP by Windows or Linux PC
- IP output throughput at rates up to 10 Mbps
- Up to 15 simultaneous connections
- Subject to network traffic conditions/restrictions

## Front panel controls and display

The front panel includes the Power button, LED panel, control buttons, and smartcard slot, as shown in the following illustration. The display indicates the current operating state; either the video channel number or the DVR mode when file payout is scheduled or locally initiated.



## Control buttons

Button	Function
	Turns receiver on or off. When receiver is switched on, the channel number is displayed on the front panel. When switched off (standby mode), "a" flashes regularly.
	In Menu mode, used to navigate menus. In Video mode, used for volume up/down (VOL-, VOL+). In Video mode, used for channel up/down (CH-, CH+).
MENU	Displays the on-screen menu. Functions as the Escape key so you can back out of menus and data entry fields.
SELECT	Runs the highlighted command or opens the highlighted menu. Enters or exits edit mode.

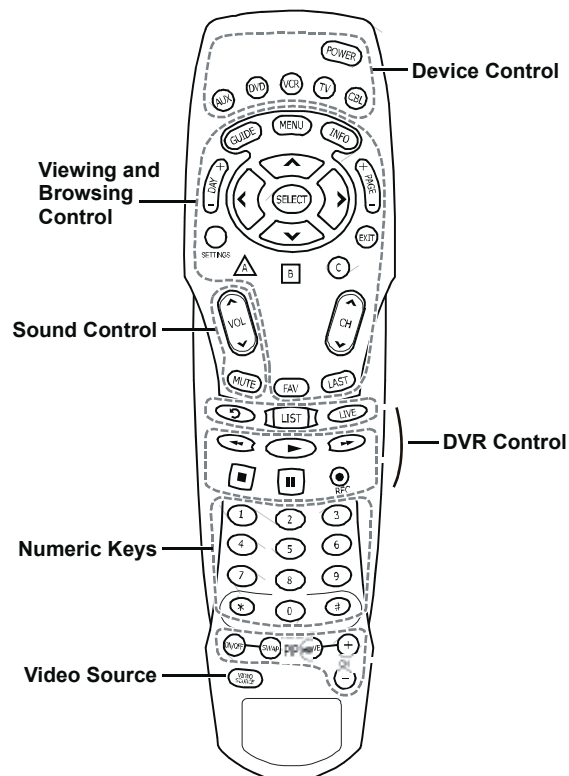
## LED panel

The LED panel displays basic signal and program information, as described in the following table:

LED Setting	Description
Menu	When illuminated continuously, indicates that the menus for the unit are displayed on the on-screen display.
Signal	When illuminated continuously, indicates that power is on and the receiver is authorized to receive the signal. When flashing, indicates that the power is on but the receiver is not authorized to receive the signal. Off when no signal has been found. For more information see the Troubleshooting appendix.
Record	When illuminated "Red" continuously, indicates that the digital video recorder in the unit is recording a program.

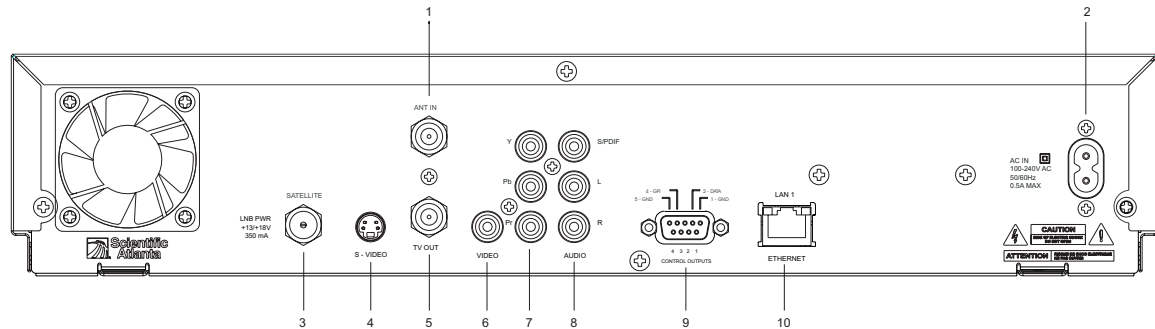
## Remote control

The D9838 Network Receiver includes the Scientific Atlanta AT8550™ AllTouch® Universal Remote Control. You can use this remote to control the receiver and the systems on-screen display. Refer to the AT8550 User's Guide for complete operating instructions.



# Rear panel connections

The connectors for the receiver are located on the rear panel as shown in the following illustration:

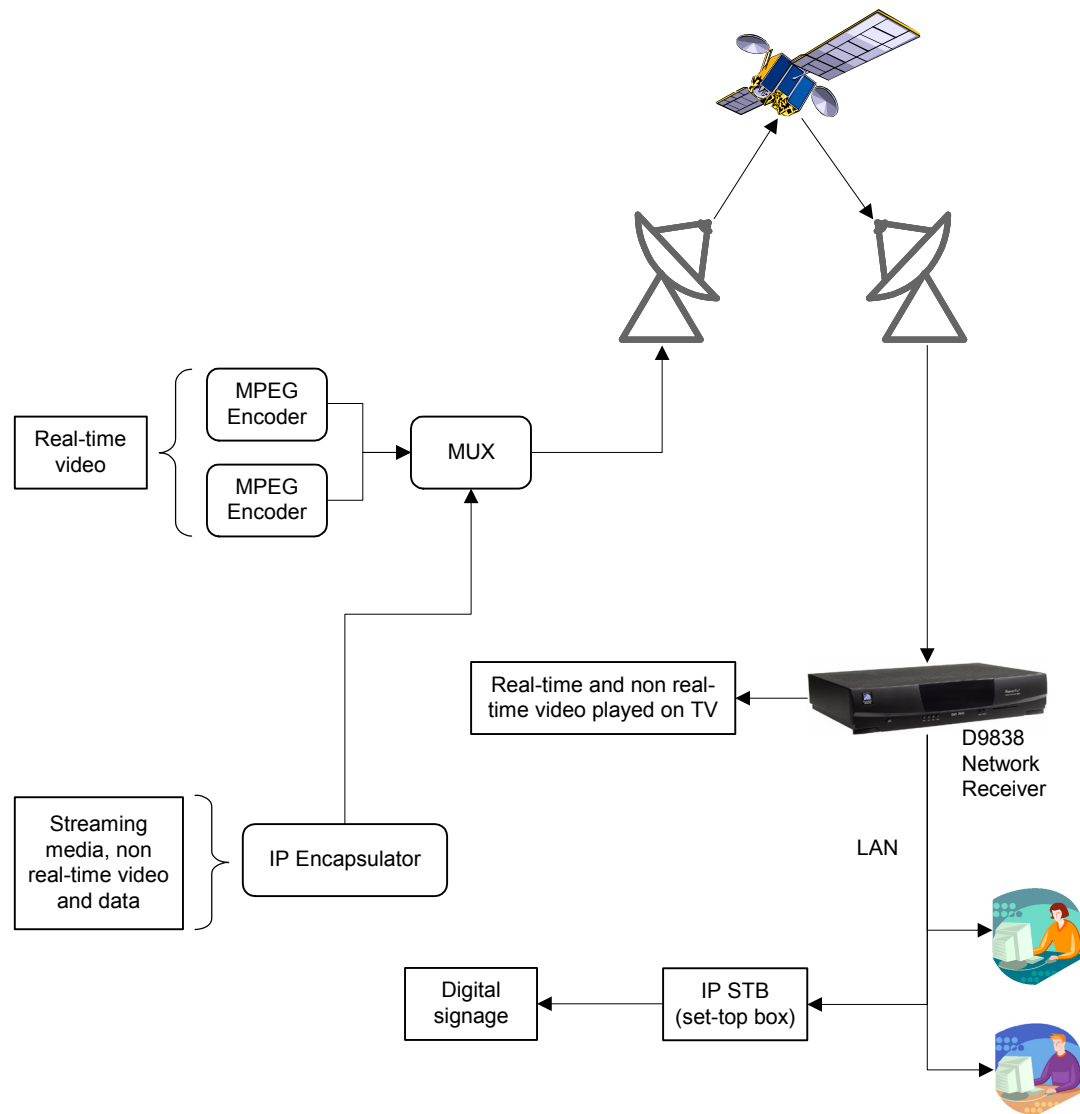


Key	Controller/Connector	Type	Description
1	Antenna In	RF	Antenna input connector for NTSC.
		IEC	Antenna input connector for PAL.
2	AC In	IEC-320 (C8)	Voltage input 100-240V AC, 50/60 Hz, 0.5A max.
3	Satellite	RF	RF signal input.
4	S-Video	S-Video	<p>Provides S(Super)-Video output to a TV monitor equipped with S-Video input jacks.</p> <p>In comparison to the normal antenna picture connection (the Video jack), S-Video delivers higher quality video detail and clarity for the playback of the DVR Content programs stored on the receiver.</p> <p>If the TV monitor includes only a Video jack and an S-Video jack, only connect the S-Video jack. Connect the S-Video jack output to the S-Video jack on the TV monitor.</p> <p>If the TV monitor includes a Video jack, an S-Video jack, and component video jacks (Y, Pb, Pr), only connect the component video jacks. Connect the Y, Pb, and Pr jack outputs to the respective Y, Pb, and Pr jacks on the TV monitor.</p>
5	TV Out	RF	Output connector for NTSC.
		IEC	Output connector for PAL.
6	Video	RCA	<p>Provides the lowest quality video color and picture resolution for the playback of the DVR Content programs stored on the receiver.</p> <p>Connect the Video jack output to the Video jack on the TV monitor.</p>

Key	Controller/Connector	Type	Description																				
7	Component Video (3 connectors: Y, Pb, Pr)	RCA	<p>Provides component video output to a TV monitor equipped with component video input jacks.</p> <p>Component video delivers the highest possible color and picture resolution for the playback of the DVR Content programs stored on the receiver.</p> <p>If the TV monitor includes a Video jack, an S-Video jack, and component video jacks (Y, Pb, Pr), only connect the component video jacks. Connect the Y, Pb, and Pr jack outputs to the respective Y, Pb, and Pr jacks on the TV monitor.</p>																				
8	Audio (2 connectors: L, R)	RCA	Provides audio output to a TV monitor. Connect the L and R jacks on the receiver to the L and R jacks on the monitor.																				
9	Data	RS-232	<p><b>D9838 9-PIN RS-232 Output Pin-out:</b></p> <table><tr><th>Pin Number</th><th>Signal Name</th></tr><tr><td>1</td><td>GND</td></tr><tr><td>2</td><td>RS-232 Data</td></tr><tr><td>3</td><td>Not used</td></tr><tr><td>4</td><td>Not used</td></tr><tr><td>5</td><td>GND</td></tr><tr><td>6</td><td>Remote Control 1</td></tr><tr><td>7</td><td>Remote Control 2</td></tr><tr><td>8</td><td>Remote Control 3</td></tr><tr><td>9</td><td>Remote Control 4</td></tr></table>	Pin Number	Signal Name	1	GND	2	RS-232 Data	3	Not used	4	Not used	5	GND	6	Remote Control 1	7	Remote Control 2	8	Remote Control 3	9	Remote Control 4
Pin Number	Signal Name																						
1	GND																						
2	RS-232 Data																						
3	Not used																						
4	Not used																						
5	GND																						
6	Remote Control 1																						
7	Remote Control 2																						
8	Remote Control 3																						
9	Remote Control 4																						
10	LAN	RJ-45	Ethernet for IP data.																				

# Typical application

The following system diagram describes a typical application for the D9838 Network Receiver:





# CHAPTER 3

## Using the Menu Interfaces

In addition to an on-screen display interface, the D9838 can be controlled via a Web interface. See Using the Web Interface on page 13 for more information.

### Working with the on-screen display interface

The on-screen display can be used to:

- Select programs for viewing
- Configure the operating parameters of the Network Receiver

The on-screen display is typically controlled by using the AT8500 handheld infrared remote control. However, the control buttons located on the front panel can also be used to navigate the on-screen menus.

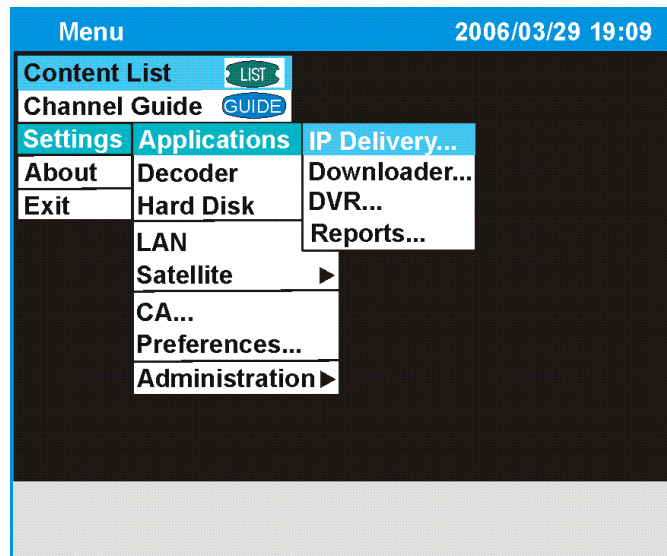
#### Navigating the menus

All screens or menus are accessed from the Main Menu. While viewing any channel, you can display on-screen menus for viewing or changing the current receiver setup. While in menus, you can change the current receiver settings, and/or display other menus. To exit a menu or setting, press MENU.

Some menus contain read-only status or configuration information. Access to menus and changeable menu options are controlled by system lock levels and a security password. For more information about lock levels and the password, see the Administration menu.

#### Shortcuts to submenus

Many menus include links to submenus. For example, the Settings Menu shown in the following diagram includes links to the Applications, Decoder, Hard Disk, LAN, Satellite, Conditional Access, Preferences and Administration submenus.



To navigate to a submenu, use the arrow keys (◀▶) on the remote control and press the SELECT button to select the submenu.

## Entering configuration values

This section describes the typical procedure for entering configuration values on the on-screen display using the remote control. (For information on specific menus, see Menu Descriptions on page 15.)

### To enter configuration values:

1. From the main Menu, press the appropriate navigation buttons to navigate to the desired menu and press SELECT.
2. Navigate to the desired setting and press SELECT to activate the setting data entry field.
3. Press the appropriate number/function buttons to enter the required data. Values are entered in one of two ways:

- For settings that require alphanumeric values (such as a downlink frequency), use the number/function buttons to enter the value.

**Note:** The system cannot accept values that are not valid for a specific setting. If a value is entered that is not valid, the system sets the value to the closest valid value to the value you entered. For example, if you enter 99 in a setting for which the valid range is between 1 and 31, the system will set the value to 31. Or, if you enter the value 0, the value will be set to 1.

- For settings that require the selection of one item in a list (such as 12HR or 24HR in the Time Format field of the Administration menu), are indicated by a down arrow (▼). Scroll through the list of available options and select the one you want to use.

4. Press SELECT to save the setting value.

## Saving parameter values

Any changes made to the current receiver setup are saved using the OK button. After saving changes, press MENU to either return to the previous menu, or continually press MENU to exit to video.

Before exiting a menu, the system might prompt you to save or discard changes made to the receiver setup (e.g., Active Tuning Settings menu), depending on the changes made. Saved changes are used to update the current receiver settings. Discarding changes restores the previously saved settings.

If you are prompted to save settings, select YES to save the new setting(s) or NO to discard the changes.



**CAUTION!** Saved settings are automatically restored when the receiver is restarted after AC power is switched off or interrupted. Upon restarting, the receiver defaults to the most recent video channel that has been displayed for more than 20 seconds after exiting from menus.

Immediately after you save changes, the system returns to the previous menu.

# Using the Web Interface

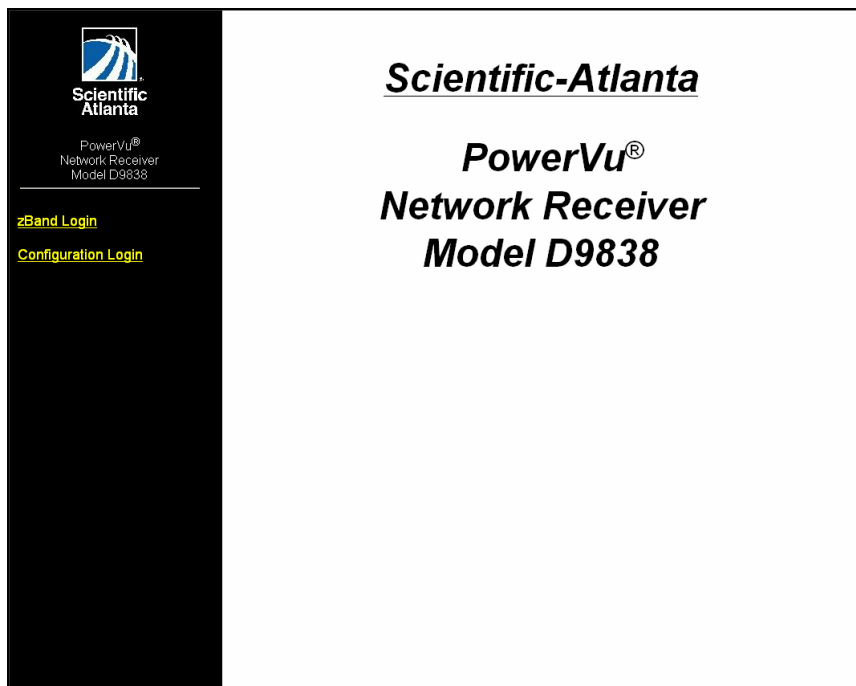
The D9838 Network Receiver provides a Web page interface, allowing easy control and monitoring via an Ethernet connection and Web browser such as Microsoft Internet Explorer (version 5.0 or higher). When the receiver is connected to a network, users with network access can control the unit, with a valid user name and password.

When the receiver is controlled via the Ethernet port, either SNMP or Web browser, the front panel menu keys cannot be used to control the unit while the unit is being controlled by the Web interface.

To set the IP address of the receiver for network communication:

1. Obtain an IP address from your IT department that does not conflict with any other communications devices on the network.
2. Enter the new IP address in the IP Address, (Subnet) Mask and Gateway field.
3. Enter and save the new IP address in the IP Address, (Subnet) Mask and Gateway fields.
4. The receiver will prompt you to reboot once the changes have been made. Select **OK** to confirm the reboot operation. The system activates the new network settings.
5. From your computer, start the Web browser and enter the receiver IP address. The system displays the D9838 Web interface when browsing to **http://d9838\_IPAddress** in a Web browser.

**Note:** d9838\_IPAddress is the actual IP address of the receiver as set in steps 2 and 3 above.



The D9838 Web interface provides access to the following two utilities:

- The D9838 Content Guide via the zBand Login.
- The D9838 configuration and status menus via the Configuration Login.

This section describes the Configuration menus only. For information on how to log on to and use the D9838 Content Guide, see Starting the D9838 Content Guide on page 65.

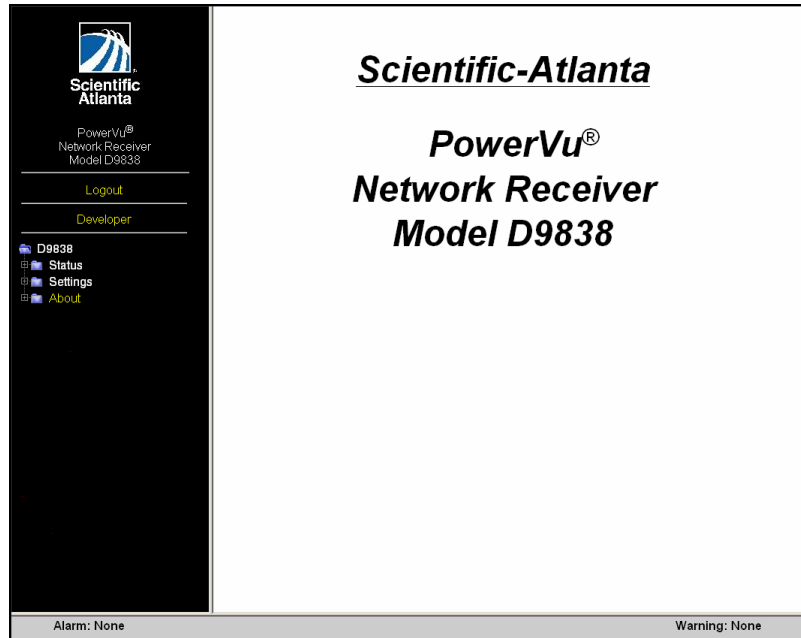
## Configuration Menus

The configuration and status parameters can be viewed or modified via the Configuration menus.

To access the Configuration and Status menus:

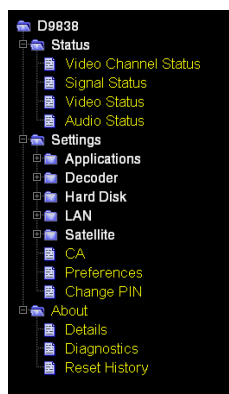
1. On the D9838 Network Receiver Password screen, enter the User Name and Password as follows:  
User Name – user (all lowercase letters)  
Password – USER (all uppercase letters)

The web page below will display.



The on-screen display follows the same menu structure as detailed in the Menu Tree section on page 15. However, the web interface includes some menus that are not accessible from the on-screen display.

2. To access the receiver's configuration, click on one of the menus on the left side of the web page to display the available submenus. Most of the options are available through the on-screen display, although the individual menu names may vary, although the Content List and Channel Guide cannot be accessed using the web interface. An expanded view of the menu structure is shown below.

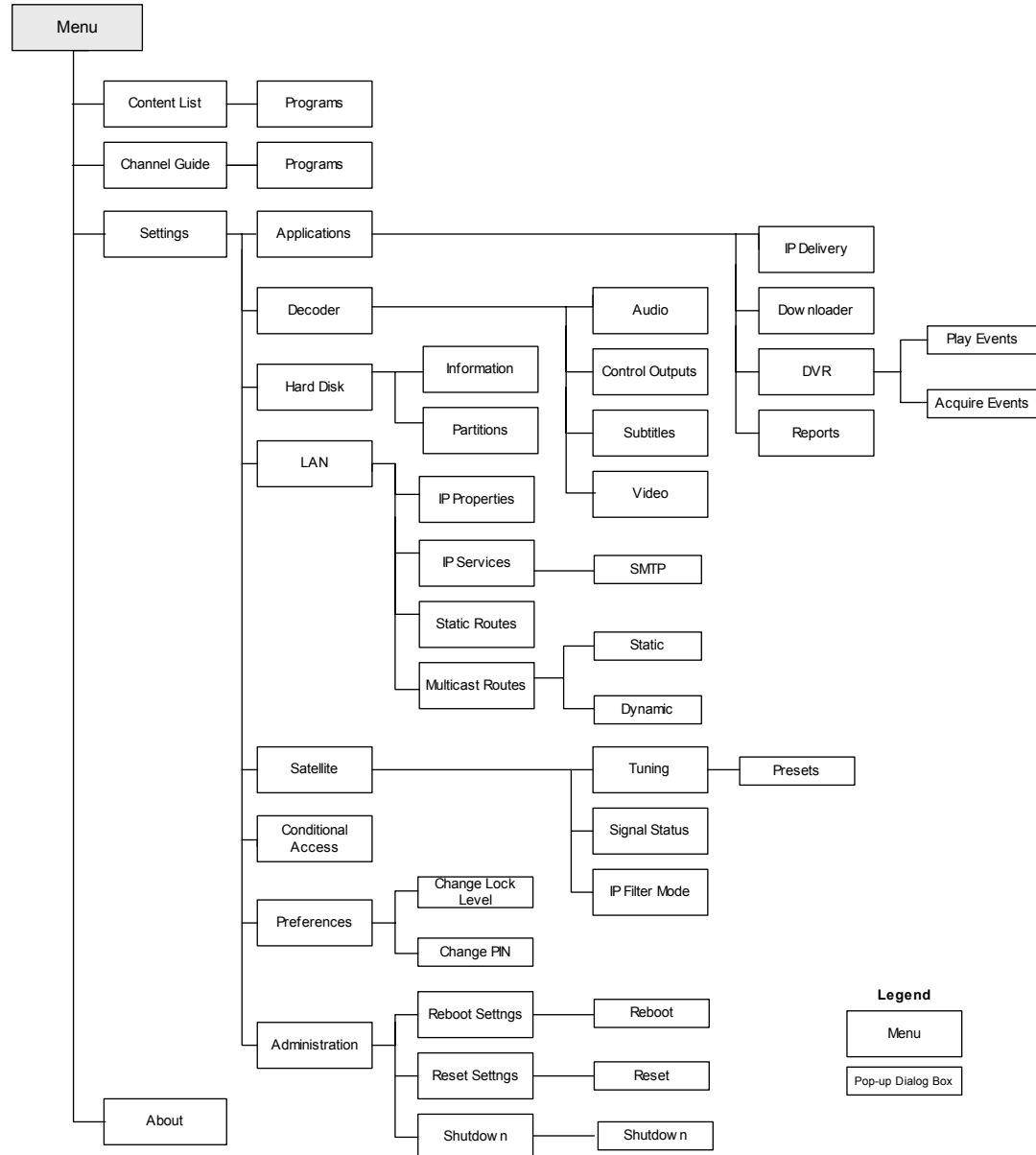


# Menu Descriptions

This chapter describes the menus and configuration settings that are included with the system. (For detailed information on how to use the menus, see Using the Web Interface on page 13.)

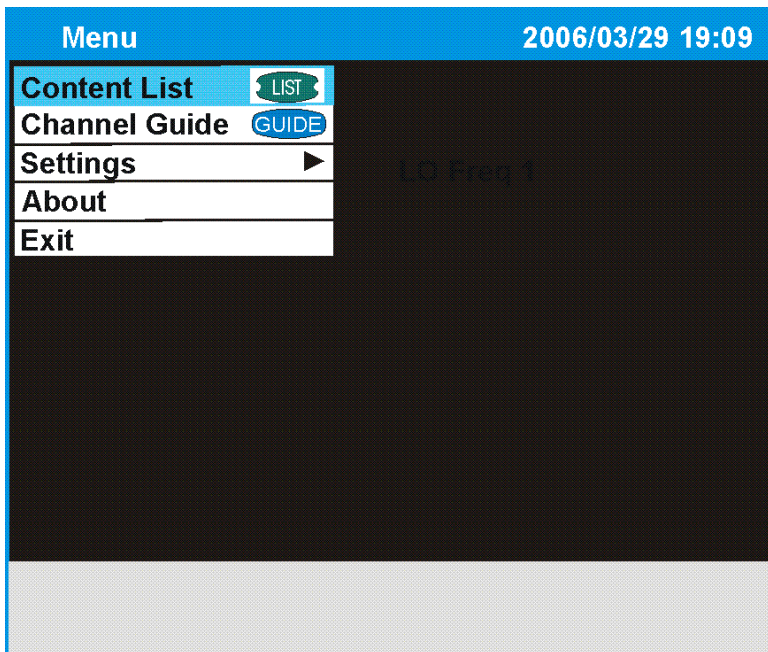
## Menu Tree

The following diagram illustrates the D9838 receiver software menu hierarchy.



# Main Menu

The Main menu provides links to the program selection menus and the configuration settings menus.



To access the Main Menu, select MENU.

The submenus include:

Submenu	Description
Content List	Displays the list of programs that are stored on the receiver's hard drive.
Channel Guide	Displays the list of services that are currently being broadcast from the uplink.
Settings	Provides links to the configuration and status submenus.
About	Displays detailed hardware and software information about the D9838 receiver and diagnostics information for troubleshooting purposes.
Exit	Closes the on-screen display.

# Content List menu

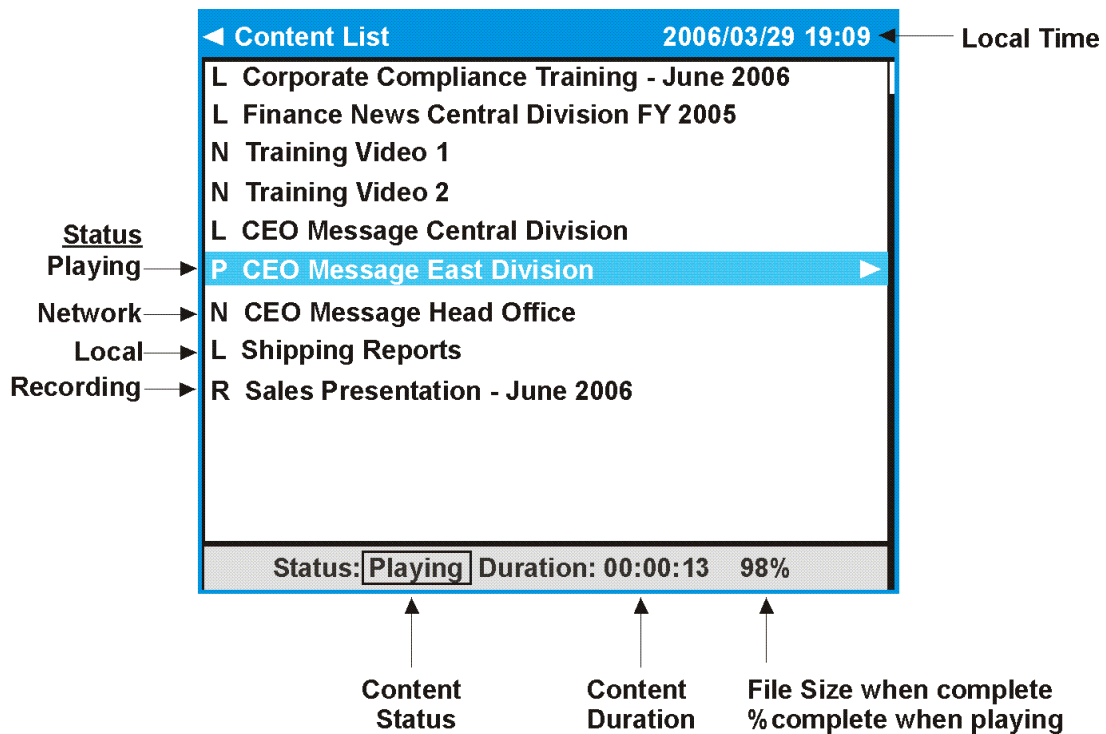


*MENU > Content List or LIST on the Remote Control*

Use the Content List menu to select a recorded program to play on the TV monitor.

Content listed in the Content List are displayed with their current status directly to the left of the file name and the status of the currently selected/highlighted entry at the bottom of the list. The local time is displayed in the top right corner of the window.

The example below shows the location of all the status indicators in the Content List.



## Service Status Options

Service Status Options	Description
L (Local)	Locally recorded file resident on the receiver hard disk.
N (Network)	File transmitted from the uplink.
P (Playing)	File is currently being played out.
R (Recording)	File is currently being recorded and stored on the receiver hard disk

### To play a recorded program:

**Note:** You cannot change channels when a program is being played.

1. In the **Content List**, scroll to the desired program or service and press **Select** to play the program.
2. When program playout is finished, the receiver will remain in the menu system. Press **MENU** to return to the broadcast channel.
3. Optionally, you can press the right arrow to display the pop-up box at the right of the list as shown in the example below.



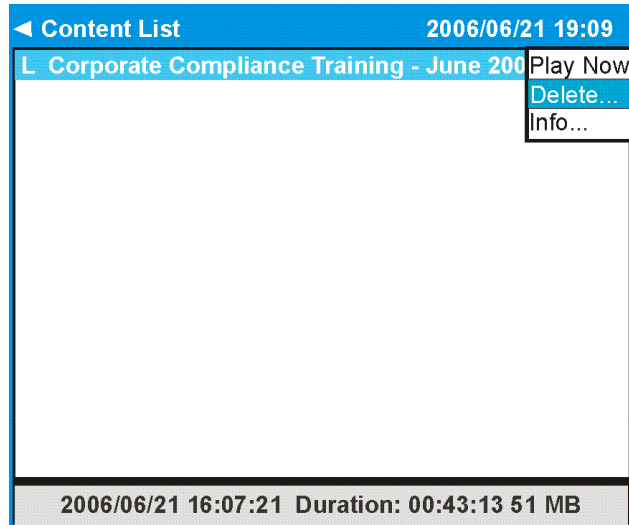
4. Select **Play Now** in the pop-up menu at the right of the screen. When you select **Play Now**, the receiver will exit the menu system and return to the video channel (i.e., the uplink channel currently being transmitted) when playout is finished.
5. The selected program will immediately start to play.



### To delete a recorded program:

**Note:** You can only delete locally recorded content, not programs transmitted from the uplink. Programs scheduled for recording and playout from the uplink are only controlled from the uplink.

1. In the **Content List**, scroll to the desired program and press the right arrow to display the pop-up box at the right of the list as shown in the example below.



2. Select **Delete** in the pop-up menu at the right of the screen.
3. The selected program will be deleted from the Content List.

### To display information about a recorded program:

1. In the **Content List**, scroll to the desired program and press the right arrow to display the pop-up box at the right of the list as shown in the example below.

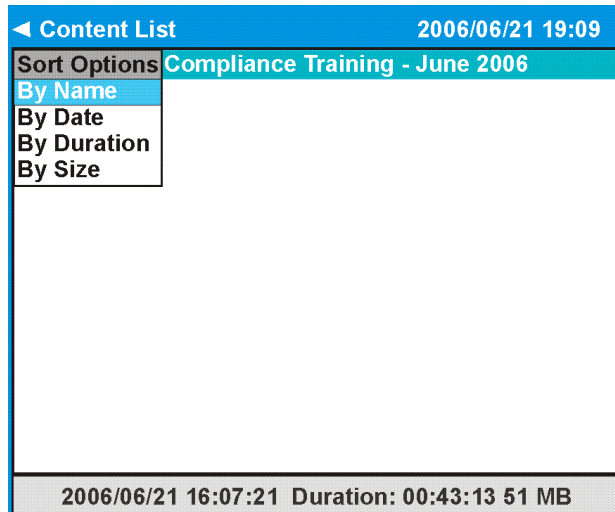


2. Select **Info** in the pop-up menu at the right of the screen.
3. The **File Information** window will display indicating specific information about the selected program such as the program name, source of the file, date it was recorded, program duration and file size.

### To sort services in the Content List:

You can sort the content in the Content List by name, date, duration or size.

1. Press the left arrow to display the sort options as shown in the example below.

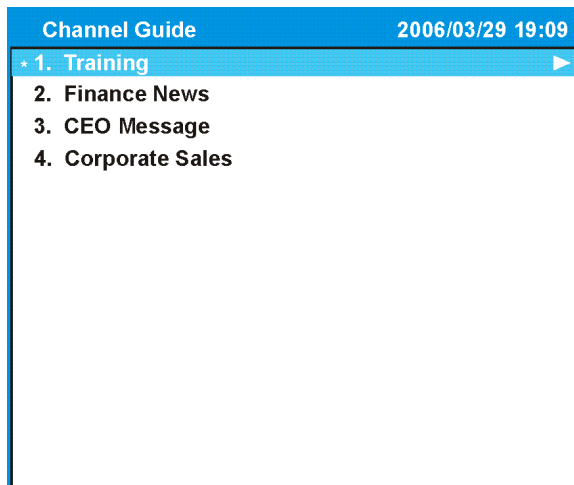


2. Select one of the options: **By Name**, **By Date**, **By Duration**, or **By Size** and then press **Select** to enable your selection.
3. The programs in the Content List will be displayed according to your selection.

### Sort Options

Sort Options	Description
By Name	Displays the content in the list in alphabetical ascending order.
By Date	Displays the content in the list in chronological ascending order.
By Duration	Displays the content in the list order from shortest to longest duration.
By Size	Displays the content in the list order from smallest to largest file size.

# Channel Guide



MENU > Channel Guide

Use the Channel Guide to select a live network channel program to view on the TV monitor.

The \* indicator appearing directly to the left of the channel in the Channel Guide indicates the channel being locally decoded as shown in the example below.

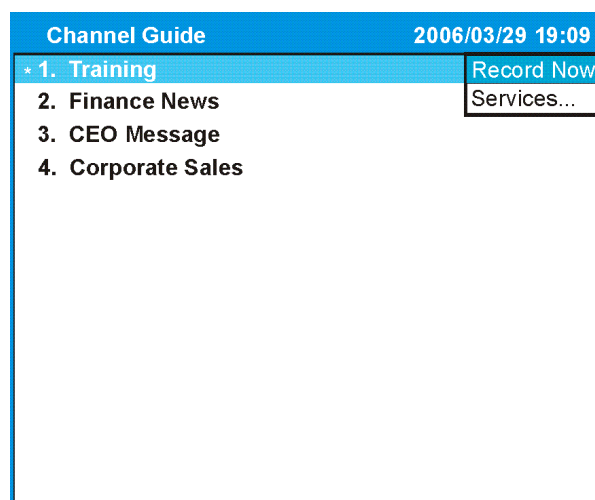
Channel on transmission



## To record a local program:

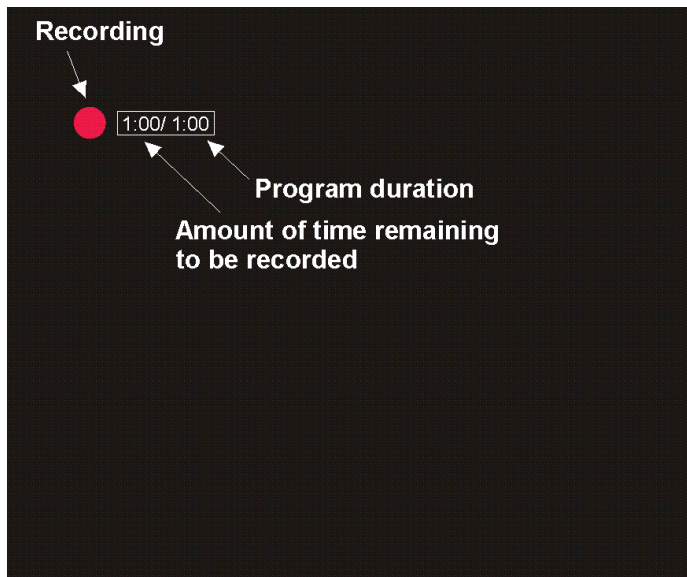
Locals channels available for recording are displayed with a \* to the left of the program name.

1. In the **Channel Guide**, scroll to the desired program and press the right arrow to display the pop-up box at the right of the list as shown in the example below.



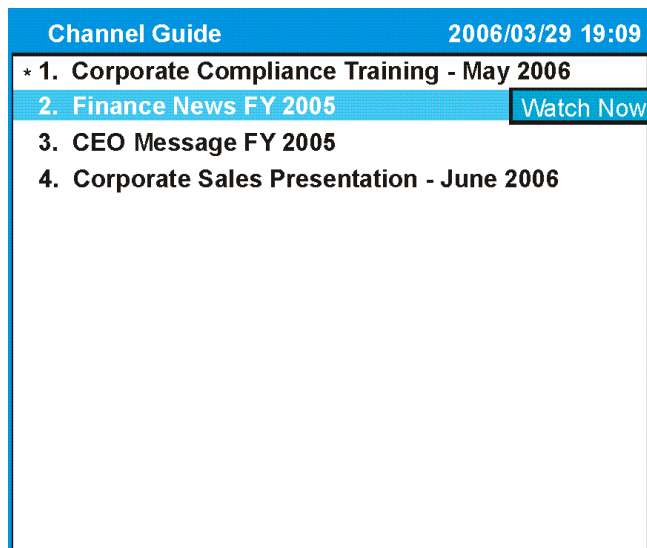
2. Select **Record Now**. The desired program will be recorded to the hard disk.

**Note:** When a program is being recorded, a red dot appears on the screen along with the time indicating the program duration and the amount of time to be recorded as shown in the example below.



**To change channels:**

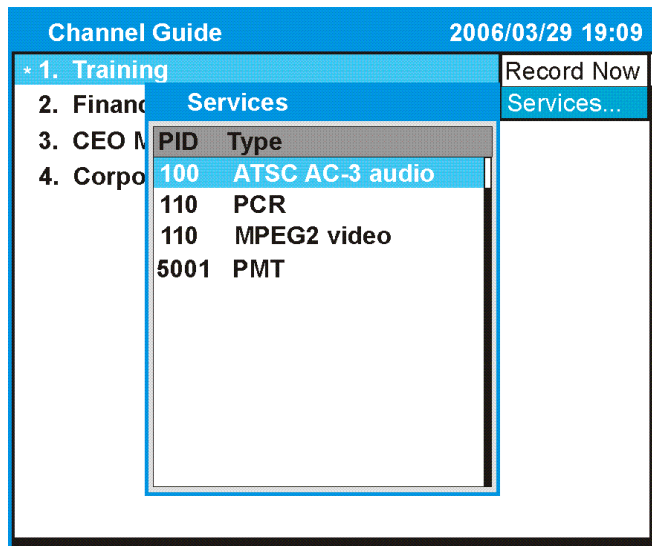
1. In the **Channel Guide**, scroll to the desired channel and press **Select**.
2. Optionally you can press the right arrow to display the pop-up box at the right of the list as shown in the example below.



3. Select **Watch Now**. The selected channel will be displayed.

**To display the services available on a selected program:**

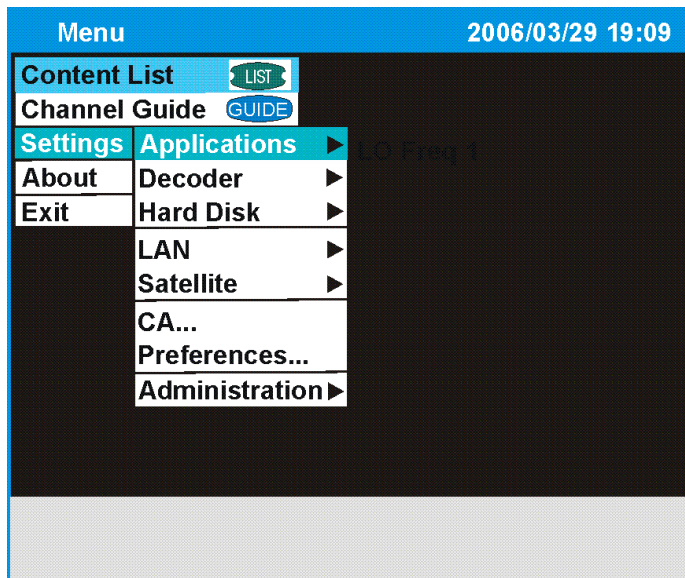
1. In the Channel Guide, scroll to the desired channel and press the right arrow to display the pop-up box to the right of the list as shown in the example below.



2. Select **Services**. The services available on the selected program display as shown in the following example such as the PID and service type – audio video, MPE data, etc.

# Settings Menu

The Settings Menu provides links to the configuration and status submenus.

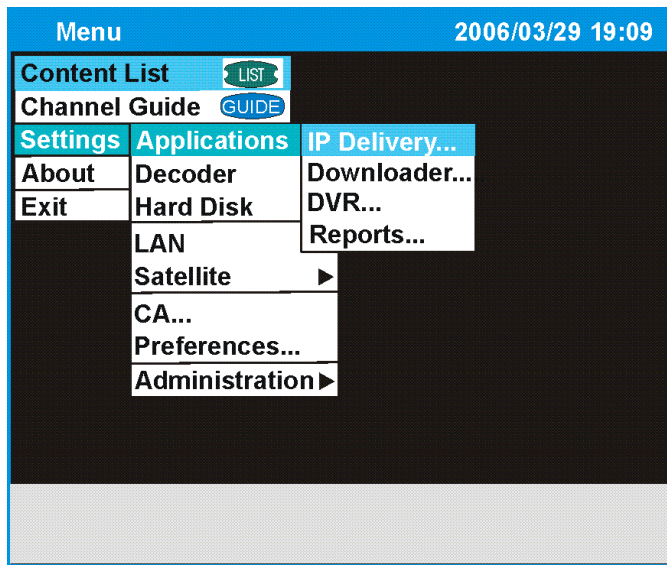


*MENU > Settings Menu*

The submenus that are available from the Settings Menu are described in the following table:

Submenu	Description
Applications	Allows access to other submenus used to control the delivery of IP services, downloading of software, viewing of the DVR configuration, and control of report generation.
Decoder	Provides access to other submenus used to set the TV channel to display video on your TV, the video format (e.g, NTSC or PAL), TV aspect ratio, subtitling control, stereo/mono selection, and AC-3 decoder settings.
Hard Disk	Displays information about the hard disk in the D9838 receiver such as its capacity and partitions.
LAN	Provides access to other submenus used to enter the IP address and associated parameters to control and monitor the receiver remotely via the Ethernet port. It also allows you to configure the receiver IP services/IP data operation.
Satellite	Provides access to submenus used to set and/or change Presets, control dish signal tuning/LNB setup, signal status, and the IP filter mode.
CA	Allows you to control the conditional access mode of the receiver, and display the CA-related parameters.
Preferences	Allows you to change the display format of the menus and control features such as the PIN and Lock Level.
Administration	Allows you to either reboot the receiver, reset the operating parameters to their factory default settings, and safely shutdown the D9838 receiver.

## Applications



*MENU > Settings > Applications*

Use the menu to:

- Control IP delivery via the data channel
- Download a new application code to the receiver
- View the acquire and playout event schedules
- Generate daily or weekly reports

### IP Delivery

IP Delivery Settings	
IP Channel Mode	Fixed ▼
IP Fixed Data Channel	1
Actual IP Data Channel	1
Announcement Address	224.0.0.0
Announcement Port	0
<div>OK Cancel</div>	

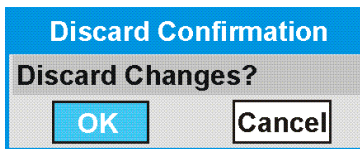
*MENU > Settings > Applications > IP Delivery*

This menu controls how the IP output data channel of the receiver is configured.

These settings are described in the following table.

Selection	Options	Description	Default
IP Channel Mode	Fixed, Video Ch	Fixed – Follows the setting in the 'IP Fixed Data Channel' field. If you change to the video channel while receiving the IP data channel, you will lose IP data.  Video Channel – Follows the video channel currently being decoded and ignores the setting in the 'IP Fixed Data Channel' field..	Fixed
IP Fixed Data Channel	Numeric value in range from 1 to 65535	Assigned IP data channel when the IP Channel is set to Fixed.	1
Actual IP Data Channel	Read only	The actual IP data channel. This follows the selected IP Channel Mode, depending on whether the selected mode is Video Ch or Fixed.	
Announcement Address		IP multicast address assigned to the announcement channel.	224.44.14.87
Announcement Port	Numeric value in the range from 0 to 65535.	UDP port number of the announcement channel.	2020

If you make any changes to the fields on this menu and attempt to return to another menu without saving the changes (i.e., without selecting OK), you will be prompted to confirm whether you want to discard the changes as shown below.

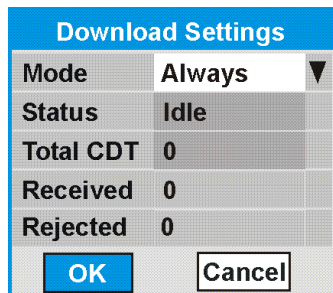


## Performing Over-the Air Downloads

Over-the-air downloads are controlled by the uplink. This feature is set to **Always** as the default so that the uplink performs downloads to the receiver when necessary. Use this feature if you want to change the frequency of over-the-air downloads at the receiver or to abort the operation at any time.

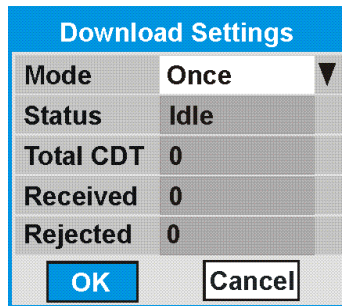
### To change the over-the-air download setting:

- I. Select Settings > Applications > Downloader to display the Download Settings submenu as shown below.





2. Change the Mode setting to **Once** as shown below and press **OK** to save the change.



**Download Settings**

Mode	Once
Status	Idle
Total CDT	0
Received	0
Rejected	0

**OK** **Cancel**

3. Once the download is complete the receiver reboots. Following reboot the receiver returns to the last viewed channel. This feature is set to **Always** for normal operation. The other fields on this submenu indicate the status of the most recent download operation. These fields are described in the following table:

Selection	Mode Options	Description
Mode	Always	The normal (default) setting for everyday operation. Unforced downloads are performed as necessary by the uplink and saved in memory in the receiver.
	Once	Use this setting if you want to perform an instantaneous download. The state changes to <b>Never</b> once the download is complete.
	Never	Use only when downloads are not required. This will force the receiver to never accept unforced downloads.
Status	Idle or	The current receiver download status.
Total CDT		Total number of Code Download Tables in the file being downloaded that are currently being received. Although a single file is being downloaded, it is made up of many of these tables. As a table is received, the CDT# increases incrementally. All of the counters are cleared when the download has completed or when the receiver is power-cycled.
Received		The number of CDTs received since the last completed download or power-cycle.
Rejected		This is the rejected table count. Tables are rejected whenever validation fails due to things like CRC failure or incorrect code or receiver type.

**Note:** Forced downloads (initiated by the uplink) are always accepted and always result in a reboot of the receiver. ***Service interruption will occur!***

## DVR

DVR Settings		
Capacity	91.89	GB
Used	17.03	GB
Local Quota	10.0	GB
Local Used	0.004	GB
Storage Group ID	1	
SCS ID	258	
Play Schedule...	Acquire Schedule...	OK

MENU > Settings > Applications > DVR

This submenu displays information about the receiver such as the storage group ID and SCS ID, and provides access to other submenus that are primarily used for diagnostics purposes:

These fields are described in the following table:

Selection	Description
Capacity	The hard disk capacity in GB allocated to DVR operations.
Used	The amount of hard disk capacity which is currently used, i.e., containing data, in GB.
Local Quota	The amount of hard disk space/capacity allocated for local content in GB. The network DVR content (transmitted from the uplink) has disk capacity priority and may overwrite the local quota if the content is large in size.
Local Used	The amount of hard disk space/capacity allocated to the local quota which is currently used for local content in GB.
Storage Group ID	The receiver is assigned to a storage group according to the content it is scheduled to receive and playout. This is the ID assigned at PowerVu Network Centre.
SCS ID	The Storage Control System identifier set at the uplink.

## DVR Acquire Schedule

DVR Acquire Schedule		
Start Time	Duration	Channel
2006/04/27 23:25:00	00:40:00	2
2006/04/28 00:15:00	00:15:00	1
2006/04/28 00:45:00	00:15:00	2
2006/04/28 01:25:00	00:40:00	2
2006/04/28 02:30:00	00:15:00	2
2006/04/28 02:45:00	00:15:00	2
2006/04/28 03:25:00	00:40:00	2
2006/04/28 04:15:00	00:15:00	2
2006/04/28 05:00:00	00:15:00	2
2006/04/28 05:25:00	00:40:00	2

MENU > Settings > Applications > DVR

This menu displays a list of the acquisition events, either scheduled or complete, and the duration of each event. This is used for diagnostics purposes. It allows you to check the acquisition event schedules in case an event is not acquired when scheduled.

## DVR Play Schedule

DVR Play Schedule		
Start Time	Duration	Channel
2006/04/27 00:05:00	00:40:00	- - -
2006/04/28 00:45:00	00:15:00	- - -
2006/04/28 01:00:00	00:15:00	- - -
2006/04/28 02:05:00	00:40:00	- - -
2006/04/28 02:45:00	00:15:00	- - -
2006/04/28 03:15:00	00:15:00	- - -
2006/04/28 04:05:00	00:40:00	- - -
2006/04/28 04:45:00	00:15:00	- - -
2006/04/28 05:15:00	00:15:00	- - -
2006/04/28 06:05:00	00:40:00	- - -

*MENU > Settings > Applications > DVR*

This menu displays a list of the scheduled playout events, and the duration of each event. This list is used for diagnostics purposes. It allows you to check the playout status in case an event does not playout when scheduled.

## Generating Reports

The receiver can generate an XML report file and transmit it as an attachment in an e-mail for the following purposes:

- Diagnostics information about the receiver hard drive content and status by partition
- Scheduled acquisition and playback events

**Note:** Reports can only be sent via e-mail. FTP is not available.

The receiver-generated email report can be used for diagnostics purposes or be formatted for viewing. See the section on SMTP Options under IP services for more information on SMTP settings.

### To generate a daily or weekly report:

1. Select Settings > Applications > Reports to display the Reports Settings submenu as shown below:

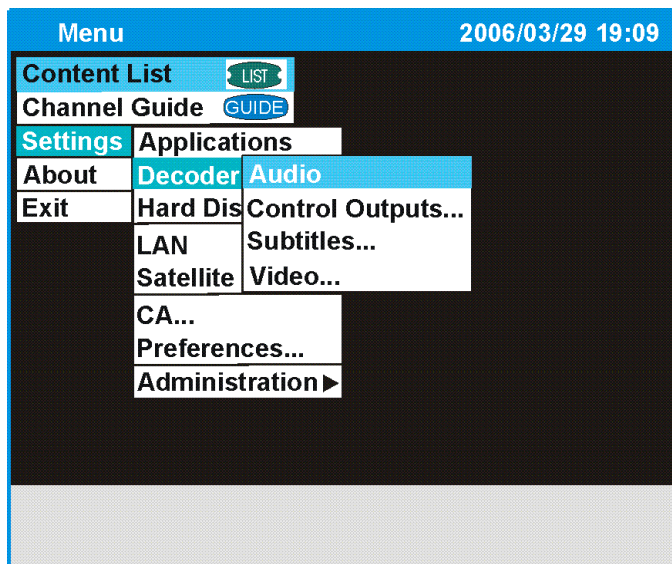
Report Settings	
Generate	Yes ▼
To Address	a.lexus@sciatl.com
Subject	HD_ID0_060606
Interval	Daily at Midnight ▼
<div>OK</div> <div>Cancel</div>	

2. Set Generate to **Yes**.

3. Enter the e-mail address in the To Address field of the recipient of the report using the up/down buttons (▲▼) on the remote control to select letters similar to a telephone keypad.
4. Enter a text string identifying the Subject of the report.
5. Select an interval for the report generation to either **Daily at Midnight** or **Weekly – Sunday at Midnight**.
6. Select **OK** to save the changes.
7. The report will be generated by the receiver at the selected interval and transmitted to the selected destination (email address).

**Note:** Reports can be more easily generated using the web browser. See Using the Web Interface on page 13 for more information.

## Decoder Settings



*MENU > Settings > Decoder*

Use this menu to access submenus to configure the video format, audio outputs, AC-3 decoder settings, and TV tuner/converter channel setting, as described in the following table:

## Setting up Audio

The image shows a screenshot of the 'Audio Settings' menu. It has a blue header with the text 'Audio Settings'. Below the header, there are three rows of settings, each with a label on the left and a dropdown menu on the right. The first row is 'Mode' with 'Stereo' selected. The second row is 'AC3 Mode' with 'Line' selected. The third row is 'Routing' with 'None' selected. At the bottom of the menu, there are two buttons: 'OK' and 'Cancel'.

*MENU > Settings > Decoder > Audio*

Use this submenu to audio outputs, audio routing and AC-3 decoder settings. These settings are described in the following table:

Selection	Mode Options	Description	Default
Mode	L-MONO	Left channel is output on L and R.	STEREO
	R-MONO	Right channel is output on L and R.	
	STEREO	Left and right channels are output on L and R respectively.	
	MIXED	Left and right channels are combined and output on both L and R.	
AC-3 Mode	LINE MODE	Setting used when full dynamic range is allowed.	RF Mode
	RF MODE	This setting is normally used for analog cable modulators when limited dynamic range is desired.	
Routing	None, Aud1, Aud2, Aud3, Aud4	Controls local routing of the audio output. Only one audio channel can be recorded at a time, e.g., Aud1, Aud 2, Aud3 or Aud4. When set to None, audio is not recorded.	

## Setting up Control Outputs

The image shows a screenshot of the 'Control Outputs Settings' menu. It has a blue header with the text 'Control Outputs Settings'. Below the header, there is one row of settings with a label on the left and a dropdown menu on the right. The label is 'Polarity' and the dropdown menu shows 'Active High'. At the bottom of the menu, there are two buttons: 'OK' and 'Cancel'.

*MENU > Settings > Decoder > Control Outputs*

Control Outputs refer to open collector pins on the rear panel of the receiver which can be triggered on the Control Output connector.

The trigger **Polarity** sets the output state. The settings are described in the following table..

Setting	Options	Description	Default
Polarity	Active High	An <b>Active</b> signal sent by the uplink results in a floating or open collector. An inactive signal results in a gnd signal.	Active High
	Active Low	The reverse of Active High.	

## Setting up Subtitles

Subtitles Settings	
Subtitle Control	OFF ▼
Subtitle Language	eng English ▼
Imitext Position	Standard ▼
Imitext Color	Auto ▼
Imitext Shade	Auto ▼
<div>OK</div> <div>Cancel</div>	

MENU > Settings > Decoder > Subtitles

Use this menu to control the receiver subtitling feature and the displayed format of Imitext subtitles. Using this sub-menu you can:

- Select Imitext subtitle text color
- Select Imitext subtitle background color
- Select Imitext subtitle position
- Select one of 43 different subtitle languages
- Select the program mode - either Imitext or DVB subtitling formats, or switch control Off or On (Auto)

The menu options are described in the following table:

Selection	Options	Description	Default
Subtitle Control	On	Functions as an "Auto" setting. DVB subtitles are displayed when only DVB subtitles are transmitted on the channel, and likewise, Imitext subtitles are displayed when only Imitext subtitles are transmitted on the channel. When both DVB and Imitext subtitles are available on the same channel, only DVB subtitles are displayed.	Off
	Off	No subtitles are displayed.	
	Imitext	Displays only Imitext subtitles. For example, if Imitext is selected, but both DVB and Imitext titles are being transmitted on the same channel, only Imitext subtitles are displayed.	
	DVB	Displays only DVB titles. For example, if DVB is selected, but both DVB and Imitext titles are being transmitted on the same channel, only DVB subtitles are displayed.	
Subtitle Language	43 languages	Select from any one of up to 43 different languages.	English
Imitext Position	Standard	Subtitles appear on screen in same position as output from other PowerVu receivers (e.g., Model D9834, D9835).	Standard
	Extended	Subtitles are positioned on screen according to the Imitext (extended) specification.	
Imitext Color (text color)	Auto	Displays text in the color transmitted by the subtitling equipment.	Auto
	Yellow	Displays text in yellow.	

Selection	Options	Description	Default
	White	Displays text in white.	
Imitext Shade (background color)	Auto	Displays background in same shade transmitted by the subtitling equipment.	Auto
	Shadow	Applies an outline to the right side of each text character. No background box is applied, i.e., text is visible directly on top of video.	
	Opaque	Applies a black box to each text character.	
	Semi	Applies a semi-transparent box to the subtitle text.	
	None	No shadow or outline is applied to the subtitle text.	

## Video Settings

Video Settings	
<b>Video Format</b>	<b>Aspect Ratio</b>
Display: Auto	Display: 4:3
Stream: NTSC480	Conversion: None
Output: NTSC	Stream: 4:3
WSS Mode: Passthrough	Actual A/R: None
WSS Out: None	TV Out: 3
OK	Cancel

MENU > Settings > Decoder > Subtitles

Use this menu to configure the video format and TV tuner/converter channel setting, as described in the following table.

## Changing the video format

The video format is set to the standard format for your country. If you attempt to change the format of the source video signal, the system displays a dialog box that warns you of what will happen if you set this field incorrectly. Check with your satellite or local service provider before changing this setting to ensure it is set correctly.

### To set the correct video signal format for your TV set if instructed to change it:

1. Press the **SELECT** and **CH+** buttons on the receiver front panel at the same time.
2. Press **SELECT** and **CH+** again. The video format is displayed on the receiver front panel (e.g., NTSC, PAL, etc).
3. Press **CH+** until you display your video format. Each change is viewable on-screen.
4. Press **SELECT** to save the setting and re-display the selected channel.

**Note:** you must be in video mode (i.e., on-screen menus not displayed) to perform this function on the receiver front panel.

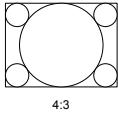
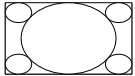
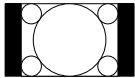
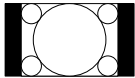
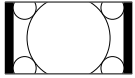
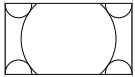
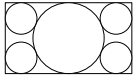
Setting	Mode Options	Description	Default								
Video Format											
Monitor	Auto	Sets the video format for the video output automatically.	Auto								
	PAL-N (AR)	Use for for the 625-line systems in Argentina.									
	PAL-M	Use for for the 525-line systems in Brazil.									
	PAL-B/G	For 625-line systems with different audio frequency subcarriers.									
	PAL-I										
	PAL-D										
	NTSC	Use for for 525-line systems.									
Stream		This is the format of the incoming stream. Read only.									
Output		This is the signal format output from the receiver. This value is determined by the Monitor setting and the actual format of the incoming stream. Read only.									
WSS Mode	Passthrough, Suppress, Auto	Wide Screen Signalling output mode. It is used to select how the receiver affects PAL WSS when it is present in the VBI.	Auto								
		<table><tr><th>WSS Mode</th><th>Description</th></tr><tr><td>Passthrough</td><td>Passes WSS (unmodified, as received by the receiver) on VBI Lline 23 when present.</td></tr><tr><td>Suppress</td><td>Disables Line 23 VBI processing. WSS is not output on line 23.</td></tr><tr><td>Auto</td><td>Modifies WSS to output the correct aspect ratio, when performing aspect ratio conversion, otherwise it is passed through.</td></tr></table>		WSS Mode	Description	Passthrough	Passes WSS (unmodified, as received by the receiver) on VBI Lline 23 when present.	Suppress	Disables Line 23 VBI processing. WSS is not output on line 23.	Auto	Modifies WSS to output the correct aspect ratio, when performing aspect ratio conversion, otherwise it is passed through.
		WSS Mode		Description							
		Passthrough		Passes WSS (unmodified, as received by the receiver) on VBI Lline 23 when present.							
		Suppress		Disables Line 23 VBI processing. WSS is not output on line 23.							
Auto	Modifies WSS to output the correct aspect ratio, when performing aspect ratio conversion, otherwise it is passed through.										
WSS Out		Indicates Passthrough mode is enabled/selected.									
Aspect Ratio											
TV	4:3, 16:9	The aspect ratio of your TV.	4:3								
Conversion	None, Auto, Auto AFD, 4:3 L/B (letter box), 4:3 P/B (pillar box), 14:9, 4:3 F/H (full height), 16:9 F/W (full width)	This is the conversion the receiver performs on the incoming signal for the picture to be displayed correctly (i.e., to correspond to the aspect ratio of your TV), based on your selection.  Auto AFD – Auto setting using Active Format Descriptor.	Auto								
Stream	4:3, 16:9	This indicates the aspect ratio of the incoming signal. Read only.									
Actual A/R		This is the type of (aspect ratio) conversion the receiver will perform based on the selected “TV” setting. Read-only.  Refer to How aspect ratio settings affect the TV display for the end users for the conversions performed by the receiver based on your selection, and the affect on the displayed picture in each case (without Auto AFD).									
TV Out	3, 4 (NTSC) 21-69 (PAL)	Sets TV channel for video display.	3 or 38								

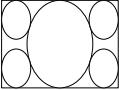
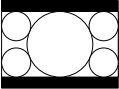
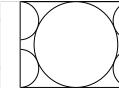
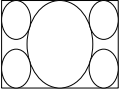
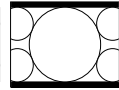
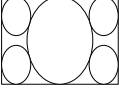


### How aspect ratio settings affect the TV display for the end users

Aspect Ratio controls how the incoming signal/program is displayed on the TV screen. The receiver matches the transmitted MPEG video format to the TV system, either 4:3 (standard) or 16:9 (wide screen). 16:9 encoded streams require conversion to correctly display video on 4:3 systems and vice versa.

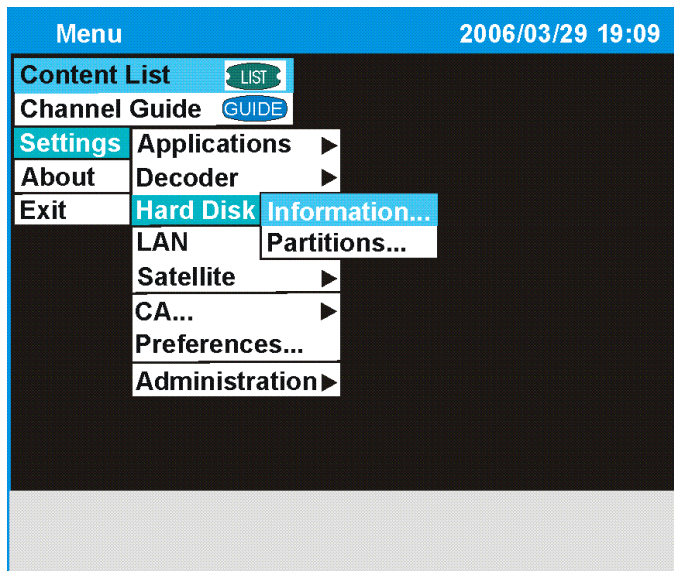
The actual effect on the TV screen of converting a program to a specific aspect ratio is illustrated and described in the following table:

Stream Aspect Ratio	TV Aspect Ratio Setting	Conversion Setting	Actual Conversion	TV Picture Format
4:3	4:3	None	None	
4:3	4:3	Auto	None	Same as above
4:3	4:3	4:3 L/B	None	Same as above
4:3	4:3	4:3 F/H	None	Same as above
4:3	4:3	4:3 P/B	None	Same as above
4:3	4:3	14:9	None	Same as above
4:3	4:3	16:9 F/W	None	Same as above
4:3	16:9	None	None	
4:3	16:9	Auto	4:3 P/B	
4:3	16:9	4:3 L/B	None	Similar to two above
4:3	16:9	4:3 F/H	None	Similar to above
4:3	16:9	4:3 P/B	4:3 P/B	
4:3	16:9	14:9	14:9	
4:3	16:9	16:9 F/W	16:9 F/W	
16:9	16:9	None	None	
16:9	16:9	Auto	None	Same as above
16:9	16:9	4:3 L/B	None	Same as above
16:9	16:9	4:3 F/H	None	Same as above

Stream Aspect Ratio	TV Aspect Ratio Setting	Conversion Setting	Actual Conversion	TV Picture Format
16:9	16:9	4:3 P/B	None	Same as above
16:9	16:9	14:9	None	Same as above
16:9	16:9	16:9 F/W	None	Same as above
16:9	4:3	None	None	 16:9 Compressed
16:9	4:3	4:3 L/B	4:3 L/B	 4:3 LB
16:9	4:3	4:3 F/H	4:3 Crop	
16:9	4:3	4:3 P/B	None	 16:9 Compressed
16:9	4:3	14:9	14:9	
16:9	4:3	16:9 F/W	None	 16:9 Compressed

**Note:** Active Format Descriptor (AFD) normally it is necessary to set both the TV Aspect Ratio and Conversion to correctly display the video program on the TV system. The Auto AFD option enables the receiver output to automatically match the display format of the video program to the TV system based on specific (uplink) program information carried in the transport stream. In this case, the receiver performs the conversion based on the TV Aspect Ratio setting combined with the program-specific uplink information to provide the “best fit” for display of the program material on the TV. This feature is primarily used in 16:9 and 14:9 (wide screen) applications.

## Hard Disk Settings



*MENU > Settings > Hard Disk*

Use the Hard Disk menu to access other submenus that display information about the hard disk drive such as capacity, number of partitions and partition size.

### Information

Hard Disk Information		
Model	WDC WD1600BB-56GUC0	
Serial #	WD-WCAL97468720	
Capacity	149	GB
Temperature	29	deg C
OK		

*MENU > Settings > Hard Disk > Information*

This menu displays information about the hard disk such as:

- Model number
- Serial number
- Capacity in GB
- Current operating temperature

## Partitions

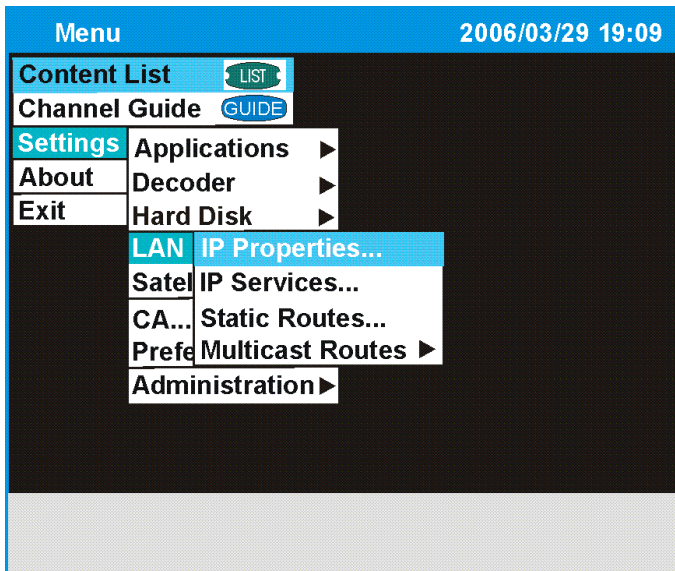
Hard Disk Partitions				
ID	Name	Used (GB)	Files Used	Cluster Size
0	DVR	0/98	6/940	470 KB
1	zBand	0/42	1/15360	256 KB
2	Utility	0/1	15/256	128 KB

*MENU > Settings > Hard Disk > <Partitions*

This menu displays information about the hard disk partitions such as:

- Number of partitions and their identifiers (e.g., 0, 1, 2, etc.)
- Amount of space used (in GB) compared to the total size of the partition
- Number of files used on each partition compared to the total number of files allowed
- Cluster size in KB

## LAN Setup



*MENU > Settings > LAN*

Use the LAN submenus to:

- Enter the IP address and associated parameters to control and monitor the receiver remotely via the Ethernet port
- Configure the receiver for IP data operation
- Access the IP configuration submenus

## IP Properties

**IP Properties Settings**

Use DHCP	No
IP Address	192.131.244.6
Subnet	255.255.255.0
Gateway	192.132.244.254
Use DNS	No
Primary	0.0.0.0
Secondary	0.0.0.0
MAC	00:11:E6:FF:F8:81
Host	D9838-506-8584
<input type="button" value="Change..."/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	

→

**Change IP Properties**

Use DHCP	No ▼
IP Address	192.131.244.6
Subnet	255.255.255.0
Gateway	192.132.244.254
Use DNS	No ▼
Primary	0.0.0.0
Secondary	0.0.0.0
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

MENU > Settings > LAN > IP Properties

Use this menu to view and or change the communication properties of the receiver such as the IP address. The IP address, Subnet mask and Gateway address should be changed as a group.

**Note:** The fields on the submenu are read-only. You must select the **Change** box to change the values in any of the fields.

The IP Properties menu options are described in the following table:

Selection	Options	Description	Default
Use DHCP	No, Yes	Set to Yes if using DHCP. In this case, all IP settings are dynamically set by the network. Set to No if not using DHCP. In this case, all IP addresses must be entered manually. When set to No, set Use DNS to No.	No
IP Address		IP Address assigned to the receiver in a network.	
Subnet (Mask)		Subnet Mask defines the size of the subnet.	
Gateway (Address)		Network Gateway Address used to connect the receiver to a WAN.	
Use DNS	No, Yes	It is recommended to set this to Yes if using DHCP.(when DHCP is set to Yes).	No
Primary		This is only used when DNS Auto is set to No. Contact your IT administrator for the primary DNS address.	
Secondary		This is only used when DNS Auto is set to Yes. Contact your IT administrator for the secondary DNS IP address.	
MAC		MAC address assigned at the Ethernet interface at the time of manufacture.	Read only
Host		Host name – D9838 receiver + user address. Read only. This is used for DNS server auto registration, if this feature is available.	Read only

The following table lists the most commonly used subnet mask values to enter for a chosen IP address, which depends on the size of your network.

Mask	Subnet Mask
8	255.0.0.0
16	255.255.0.0
24	255.255.255.0

#### To change an IP address:

1. On the IP Properties Settings submenu, select the **Change** box.
2. On the Change IP Properties enter a new IP address in the IP Address field.
3. Select **OK** to save the setting.

#### IP Services

IP Services Settings		
CIFS	Disable	▼
FTP	Disable	▼
HTTP	Disable	▼
IGMP	Disable	▼
RIP v2	Disable	▼
SNMP	Disable	▼
Telnet	Disable	▼
zBand	Disable	▼
SMTP...	OK	Cancel

*MENU > Settings > LAN / IP Services*

Use this submenu to enable/disable the IP application protocols.

**Note:** If you change any setting on this submenu, you need to reboot the receiver for the changes to take affect.

The IP Services settings are described in the following table:

Selection	Options	Description	Default
CIFS	Enable, Disable	Specifies whether the CIFS (Common Internet File System) service is enabled on the receiver. If Enabled, a read-only network share will be published to allow network access to the content delivered via the zBand server.	Enable
FTP	Enable, Disable	Specifies whether FTP (File Transfer Protocol) service is enabled on the receiver.	Enable
HTTP	Enable, Disable	Specifies whether HTTP service is enabled on the receiver.	Enable
IGMP (Internet Group Management Protocol)	Enable, Disable	Specifies whether IGMP service is enabled on the receiver. When enabled (On) the receiver dynamically accepts multicast requests from other network devices to join multicast groups with the specified multicast IP addresses.	Disable

Selection	Options	Description	Default
RIP v2 (Routing Information Protocol)	Enable, Disable	Specifies whether RIPv2 is used or not. When enabled (On), other network devices can request specific unicast IP addresses to be filtered. The receiver dynamically accepts up to 10 unicast IP address requests from other devices.	Disable
SNMP	Enable, Disable	Specifies whether SNMP service is enabled on the receiver.	Disable
Telnet	Enable, Disable	Specifies whether Telnet service is enabled on the receiver.	Enable
zBand	Enable, Disable	Specifies whether zBand service is enabled on the receiver.	Enable

If SMTP is used to generate reports or other information via email, you will need to enter the SMTP options via the D9838 Web browser. See Using the Web Interface on page 13 for information on using the D9838 Web browser.

To display the SMTP Options submenu, select SMTP at the bottom of the window. The SMTP Options submenu is a read-only menu which allows you view the SMTP server communication parameters for file transmission. All the parameters on this menu must be entered via the D9838 Web browser as previously mentioned.

### SMTP Options

SMTP Options	
Server Host	Local SMTP Server
Authentication	No
User	D9838 Report
From Address	D9838-503-7164@D9838.com
From Name	Alex
<input type="button" value="OK"/>	

The SMTP Options settings are described in the following table:

Selection	Options	Description	Default
Server Host		Name of the SMTP host server.	
Authentication	No, Yes	Specifies whether authentication is used or not.	No
User		Specifies the user name for authentication against the Server Host. This field is only used if Authentication is set to Yes.	
From Address		The e-mail address of the receiver.	
From Name	No, Yes	The name or identifier of the person sending the file in text format.	

**Note:** The SMTP options are read-only on the submenu. They can only be entered using the web browser. See Using the Web Interface on page 13 for more information.

## Static Routes Settings

◀ Static Routes Settings			
Destination	Address	Netmask	Gateway
No Data			

*MENU > LAN > Static Routes*

Use this menu to add or delete static (unicast) IP addresses. The system can receive up to six (6) static IP routes (groups) to facilitate communication with other network devices. These groups are specified along with their associated Subnet Masks and Gateway Addresses. Presetting the receiver to communicate with other equipment allows the receiver to output IP data for various applications, such as file transfers or streaming video.

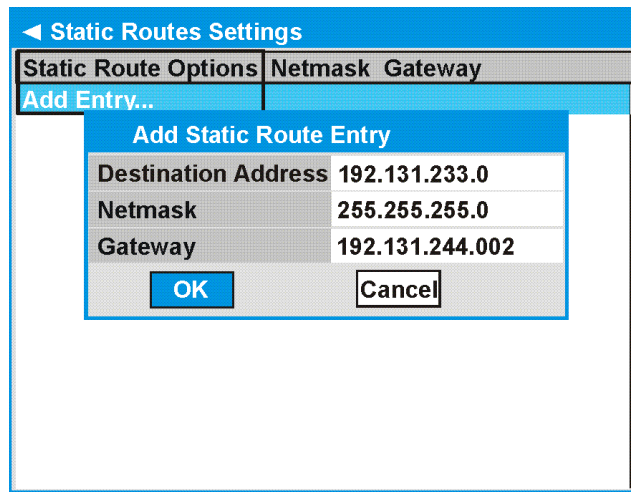
### To add a static route:

- I. Press the left arrow to display the Static Route Options as shown in the example below.

◀ Static Routes Settings		
Static Route Options	Netmask	Gateway
Add Entry...		



2. Select **Add Entry**. The Add Static Route Entry dialog box will display as shown below.



3. In the Add Static Route Entry dialog box, using the number keys, enter the Destination IP Address, Netmask and Gateway address for the static route.
4. Press **Select** after entering each set of values and the down arrow to move down to the next field.
5. When finished entering the values, press **OK** to save the settings.

If an invalid number is entered, the system displays the "Input value out of range" message. Once you enter a valid number, you can continue adding Static IP addresses for other devices.

#### To edit a Static Route:

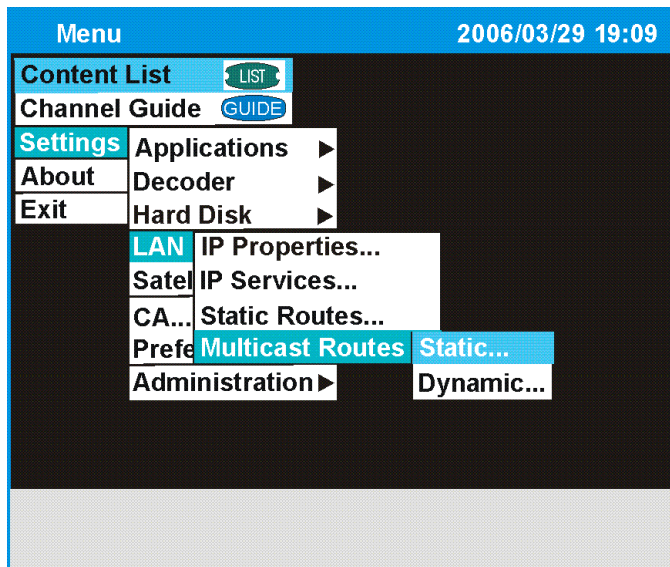
1. In the Static Route Settings window, scroll down through the IP addresses until you find the address that you want to edit.
2. Press the right arrow to display the **Edit** box, and then press **Select**.
3. Change the IP address as desired.
4. Press **OK** to save the change.

#### To delete a Static Route:

1. In the Static Route Settings window, scroll down through the IP addresses until you find the address(es) that you want to delete.
2. Press the right arrow to display the **Delete** box, and then press **Select**.
3. The selected IP address will be deleted. If you want to delete more than IP address, you have to delete them one at a time.

## Multicast Route Settings

Use this menu to add or delete a multicast static IP addresses or display the status of dynamic IP multicast addresses. A multicast IP address can be added to the receiver setup to allow communication with other downstream devices. Presetting the receiver to communicate with other equipment configures the receiver to output IP data for various applications such as file transfers or streaming video.



MENU > LAN > Multicast Routes

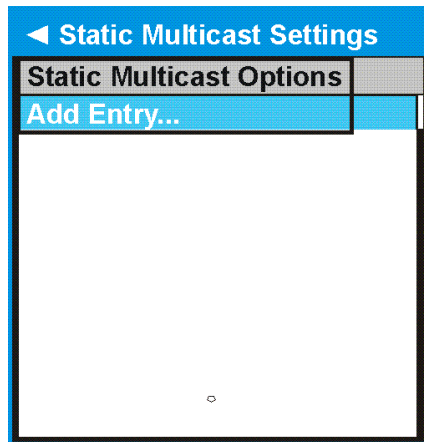
## Static Multicast Settings



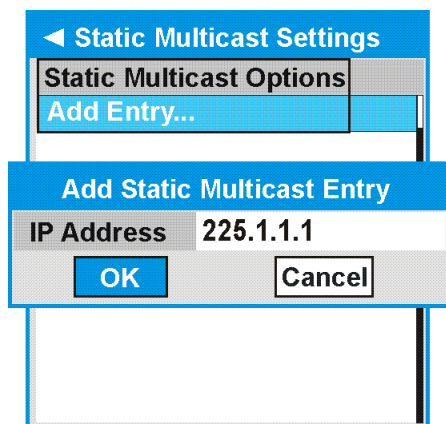
MENU > LAN > Multicast Routes > Static

### To add a static multicast entry (route):

1. Press the left arrow to display the Static Multicast Options as shown in the following example.



2. Select **Add Entry**. The Add Static Route Entry dialog box will display as shown below.



3. In the Add Static Route Entry dialog box, using the number keys, enter the destination IP Address, and then select **OK**.

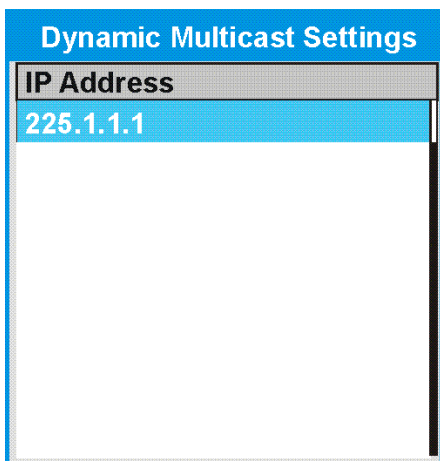
If an invalid number is entered, the system displays the “Input value out of range” message. Once you enter a valid number, you can continue adding Static multicast IP addresses for other devices.

#### **To delete a static multicast address (route):**

4. In the Static Multicast Settings window, scroll down through the IP addresses until you find the address(es) that you want to delete.
5. Press the right arrow to display the Delete box, and then press **Select**.
6. The selected IP addresses will be deleted. If you want to delete more than one IP address, you have to delete one at a time.

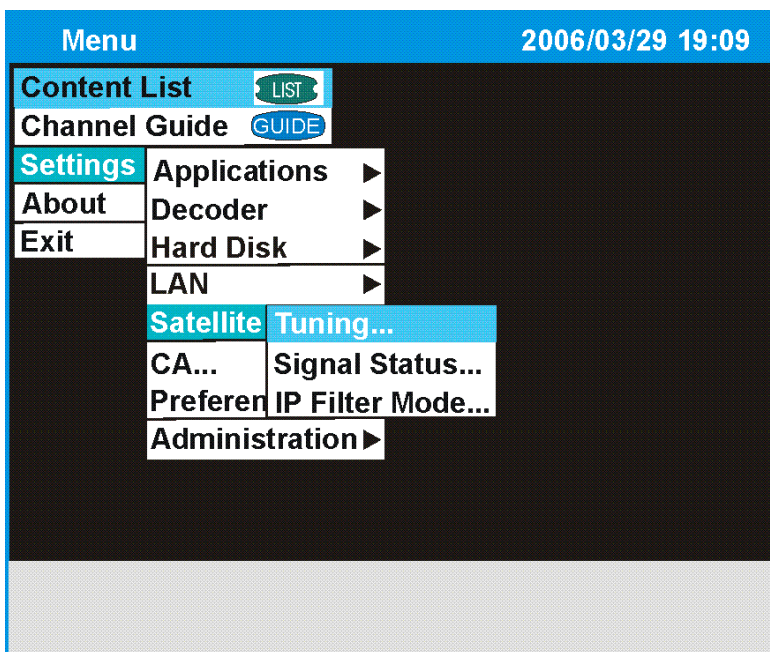
## Dynamic Multicast Status

This menu displays a list of the dynamic IP addresses. Dynamic Multicast IP addresses are communicated to the receiver from the network device(s), and are read-only. The IP addresses listed on this submenu are obtained from the IGMP service when it is enabled.



*MENU > LAN > Multicast Routes > Dynamic*

## Satellite Settings



*MENU > Settings > Satellite*

Use this menu to access submenus to set up the LNB and set up one of 64 available user-editable presets for quick re-tuning to other broadcasts, configure the LNB signal parameters used by the receiver to lock on to the satellite signal, display read-only information about the signal status, and to set the IP filter mode.

## Tuning

Active Tuning Settings					
Network					
Frequency	3.7	GHz	LO Select	LO1	▼
Sym Rate	30.8	MS/s	LO Freq 1	5.15	GHz
FEC	AUTO	▼	LO Freq 2	0.0	GHz
Polarity	Horiz	▼	Crossover	0.0	GHz
Net ID	1		LNB Power	Off	▼
			Signal Lock	Yes	
Audio Tone	Disable	▼	Signal Level	44	
Presets...		OK		Cancel	

MENU > Settings > Satellite > Tuning

Use this menu to set up the active tuning settings. The active tuning is NOT a preset itself, but can be loaded from a preset or saved to a preset by entering the presets dialog.

The configuration options for this submenu are described in the following table:

Setting	Options	Description	Default
Network	Alphanumeric value	Generally, this value is the name of the satellite and transponder that is used to receive the signal (for easy reference). It is transmitted by the uplink.	
Downlink	Numeric value in range from 0.0 to 15.0 GHz	Sets the current Downlink operating frequency used by the receiver for tuning the received digital signal. For C-Band, Downlink Freq = LO Freq - L-band Freq. For Ku-Band, Downlink Freq = LO Freq + L-band Freq.	3.449
Sym Rate	Numeric value in range from 1.0 to 45.0 MS/s	Symbol rate. The value must match the symbol rate of the transmitted signal.	28.3465 MSps
FEC	AUTO, 1/2, 2/3, 3/4, 5/6, 7/8	Frequency Error Correction rate. The FEC must match the FEC of the transmitted signal.	AUTO
Polarity	Horiz (Horizontal) Vert (Vertical)	Sets the signal polarity. The selected setting must match the polarity of the transmitted signal.	Horiz
Net ID	Numeric value in range from 1 to 65535	Network ID of the uplink signal that the receiver is to receive when using the current preset. The receiver's Network ID must match the Network ID associated with the transmitted signal. Obtain the number from your local service provider.	1
Audio Tone	Enable, Disable	Enables or disables a tone as the receiver achieves signal lock. This is used during dish installation.	Disable
LO Select (Sets a 22	LO1	22 kHz off	LO1
	LO2	22 kHz on	

Setting	Options	Description	Default
kHz tone for Ku-band dual LNB)	XOVER	22 kHz on if the downlink frequency is greater than the crossover frequency	
LO Freq 1	Enter number	If C-band application, set to 5.15 GHz (default). If Ku-band single LNB, enter LO Freq. and set LO Freq 2 and Crossover to 0.0. If Ku-band dual LNB, enter LO Freq 1, LO Freq 2 and Crossover.	5.15 GHz
LO Freq 2	Enter number	Enter if Ku-band dual LNB application. LO Freq 2 > LO Freq 1	0.0
Crossover	Numeric value in range from 0.0 to 15.0 GHz	Sets the crossover frequency, an internal threshold frequency used for selecting the LO1 or LO2 frequency, depending on the current Downlink frequency settings. This option is only used in dual-band LNB applications. Note: In single-band LNB applications, set this value to 0.0.	0.0
LNB Power	On, Off	Sets the receiver's power source to an external LNB connection via the RF Input. Use this setting if external LNB power source is used. Note: Power will not be applied to the LNB if Power is set to Off.	Off
Signal Lock	Yes, No	Indicates the signal synchronization status	
Signal Level	Numerical value in range from 0 to 99, read-only	Indicates the strength of the received signal	

## Changing an Active Preset

To change a displayed preset to an Active preset:

1. On the Active Tunings Settings, select **Presets**. The Preset Settings window will be displayed as shown in the example below.

Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Horiz	1
2	11.35	21.0	AUTO	Horiz	1
3	3.449	28.3465	AUTO	Horiz	0
4	3.449	28.3465	AUTO	Horiz	0
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0

**Note:** The names of the presets are displayed at the bottom of the screen as you navigate through the settings.

2. Scroll down to the preset you want to use, and then press the right arrow to display the pop-up box to the right as shown below:



Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Hor	Copy To Activate
2	11.35	21.0	AUTO	Hor	Edit...
3	3.449	28.3465	AUTO	Hor	Copy From Active
4	3.449	28.3465	AUTO	Hor	Copy To Preset...
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0

3. Select **Copy To Active** to enable the selected preset.
  4. The signal parameters from the Active preset will be copied to the displayed preset.
- Note:** It takes several seconds for the system to display the signal from the new Preset.

## Editing a Preset

### To edit a preset:

1. On the Active Tunings Settings, select **Presets**. The Preset Settings window will be displayed as shown in the example below.

Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Horiz	1
2	11.35	21.0	AUTO	Horiz	1
3	3.449	28.3465	AUTO	Horiz	0
4	3.449	28.3465	AUTO	Horiz	0
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0

2. In the Preset Settings window, scroll to the desired preset number and press the right arrow to display the flyout menu to the right as shown below.

Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Hor	Copy To Active
2	11.35	21.0	AUTO	Hor	Edit...
3	3.449	28.3465	AUTO	Hor	Copy From Active
4	3.449	28.3465	AUTO	Hor	Copy To Preset...
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0

3. In the flyout menu, select **Edit**. The Preset Edit Menu will be displayed.

Preset Edit					
Name					
Preset	1		LO Select	LO1	▼
Downlink	3.449	GHz	LO Freq 1	5.15	GHz
Sym Rate	28,3465	MS/s	LO Freq 2	0.0	GHz
FEC	AUTO	▼	Crossover	0.0	GHz
Polarization	Horiz	▼	LNB Power		▼
Net ID	1				
OK		Cancel			

4. In the Preset Name box, type the desired preset name.
5. Select the parameters for the preset and press **OK** to save the parameters.



## Copying a Preset

To copy the signal parameters from one preset to another:

1. On the Active Tunings Settings, select **Presets**. The Preset Settings window will be displayed as shown in the example below.

Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Horiz	1
2	11.35	21.0	AUTO	Horiz	1
3	3.449	28.3465	AUTO	Horiz	0
4	3.449	28.3465	AUTO	Horiz	0
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0

2. In the Preset Settings window, scroll to the desired preset number and press the right arrow to display the flyout menu to the right as shown below.

Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Hor	
2	11.35	21.0	AUTO	Hor	
3	3.449	28.3465	AUTO	Hor	
4	3.449	28.3465	AUTO	Hor	
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0

Copy To Active  
Edit...  
Copy From Active  
Copy To Preset...

3. In the flyout menu, select **Copy To Preset**. The Copy Preset dialog box will be displayed.

Copy Preset From	
From Preset	1 ▼
To Preset	2 ▼
OK	Cancel

4. In the Copy preset dialog, enter the preset number you want to copy the selected preset parameters to, and select **OK**.
5. The parameters from the selected preset will be saved to the other preset.

## Copying from the Active Settings to a Preset

To copy the signal parameters from the active settings to a preset:

1. On the Active Tunings Settings, select **Presets**. The Preset Settings window will be displayed as shown in the example below.

Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Horiz	1
2	11.35	21.0	AUTO	Horiz	1
3	3.449	28.3465	AUTO	Horiz	0
4	3.449	28.3465	AUTO	Horiz	0
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0

2. In the Preset Settings window, scroll to the desired preset number and press the right arrow to display the flyout menu to the right as shown below.

Presets Settings					
#	Freq	Sym	FEC	Pol	NID
1	3.7	25.0	AUTO	Hor	Copy To Active
2	11.35	21.0	AUTO	Hor	Edit...
3	3.449	28.3465	AUTO	Hor	Copy From Active
4	3.449	28.3465	AUTO	Hor	Copy To Preset...
5	3.449	28.3465	AUTO	Horiz	0
6	3.449	28.3465	AUTO	Horiz	0
7	3.449	28.3465	AUTO	Horiz	0
8	3.449	28.3465	AUTO	Horiz	0
9	3.449	28.3465	AUTO	Horiz	0
10	3.449	28.3465	AUTO	Horiz	0

3. In the flyout menu, select **Copy From Active**.
4. The parameters from the Active settings will be copied to (i.e., overwrite) the selected preset.

## Signal Status

Signal Status				
Network Name				
Frequency	3.7	GHz	Lock	Yes
Sym Rate	30.8	MS/s	Quality	10
FEC	7/8		Level	44
Polarization	Horiz		CEC	0
			UEC	0
			BER	0.0e-8
Clear Counters			OK	

MENU > Settings > Signal Status

The Signal Status menu is a read-only screen that summarizes the input settings for the acquired signal, as described in the following table:

Field	Description
Network Name	Indicates the acquired network name. This confirms that your network signal has been acquired.
Frequency	Indicates the current downlink operating frequency used by the receiver for tuning the received digital signal.
Sym Rate	Indicates the symbol rate.
FEC	Indicates the Forward Error Correction rate.
Polarity	Indicates the signal polarity.
Lock	Indicates the signal synchronization status
Quality	Indicates the quality of the received signal.
Level	Indicates the strength of the received signal
CEC	Indicates the Corrected Error Count.
UEC	Indicates the Uncorrected Error Count.
BER	Indicates the QPSK bit error rate.

To reset the CEC and UEC counts to 0, select Clear Counters.

### Dish alignment using signal tones

Dish alignment is best achieved using the audible signal adjustment tone. The characteristics of the signal tone are shown in the table below. Align the dish to achieve signal lock and then best signal quality.

Signal Lock/Quality	Tone
No Signal Lock	Slow repeating tone
Signal Lock	Steady tone
Signal lock + increasing Signal Quality	Steady tone Increasing in pitch

Provided the RF cable is connected between the satellite receiver and the LNB, Signal Level displays a low number (typically less than 40). As the receiver achieves Signal Lock, the Signal Level increases, and the tone changes from a slow repeating beep to a steady tone. The audio tone is enabled on the Active Tuning Settings menu. Once Signal Lock is obtained, align the dish to increase the Signal Quality to the best possible value (up to a maximum of 10).

### **Signal level and signal quality**

Your network receiver actively monitors and updates the signal level and signal quality characteristics of the incoming signal, and displays this information numerically.

The Signal Level is associated with the Symbol Rate and signal input level. The Signal Level display is continuously updated to indicate the relative strength of the received QPSK input signal. It is displayed in the range from 0 to 99. Signal Level is displayed on the Active Tuning Settings and Signal Status menus.

The Signal Quality (displayed in the range from 0 to 10) is associated with the Bit Error Rate, and is a measure of how much of the original signal information is being received.

Certain receiver settings can cause signal loss or degradation which can compromise video or audio information, or data. The effect of any changes you make to your satellite LNB antenna installation is displayed in real time. Signal Level and Signal Quality can also be affected by changes at the signal source, and/or by adverse environmental or terrestrial conditions. Taken in combination, certain receiver settings and signal conditions can cause the Signal Level and Signal Quality to increase or decrease accordingly.

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 at this time. Your service provider can advise you about channels that may be adversely affected. See Appendix C for troubleshooting information.

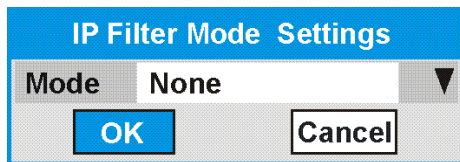
To verify your satellite LNB antenna installation or improve signal reception, refer to your antenna equipment installation manual, or contact your local service provider.

### **Signal lock**

The Signal Lock status is continuously updated to indicate whether the receiver is synchronized with the received LNB signal. Signal Lock status is displayed on the Active Tuning Settings and Signal Status menus.

If the receiver is able to synchronize to a carrier frequency and an MPEG stream is present, Signal Lock displays Yes and the Signal LED on the receiver front panel is on. A tone can be heard as your receiver achieves signal lock. The tone starts as a slow repeating beep and rapidly increases to a steady tone once signal lock is achieved. If no carrier is detected, Signal Lock displays No, the Signal LED is off, and the audible tone does not change.

## Setting IP Filter Mode

The dialog box has a blue title bar that says "IP Filter Mode Settings". Below the title bar, there is a label "Mode" followed by a dropdown menu currently showing "None". At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

IP Filter Mode Settings	
Mode	None ▼
<div>OK Cancel</div>	

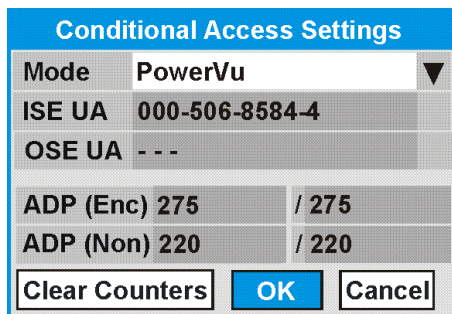
MENU > Settings > Satellite > IP Filter Mode

Use the IP Filter Mode to filter the transmission of multicast data to specific receive devices. If all multicast data is to be transmitted to all receive devices, set the mode to **Forward All**. The default setting is **None**.

Selection	Options	Description	Default
Mode	None	No multicast IP data is forwarded to any devices except for the multicast data targeted for the internal content distribution client.	None
	Filter List	Forwards multicast IP data (i.e., packets) matching only the specified multicast addresses in the filter list, in addition to the multicast data targeted for the internal content distribution client.	
	Forward All	Forwards all multicast IP data received without filtering.	

## Changing the CA Mode

Use this configuration dialog box to set the conditional access setting/. The CA Mode can be set to either **Free-To-Air** to receive in-the-clear MPEG programs or **PowerVu** to receive programs using a PowerVu scrambled service. The default setting is **PowerVu**.

The dialog box has a blue title bar that says "Conditional Access Settings". Below the title bar, there is a label "Mode" followed by a dropdown menu currently showing "PowerVu". Below that are two labels: "ISE UA" with the value "000-506-8584-4" and "OSE UA" with the value "---". Below these are two labels: "ADP (Enc) 275" with a sub-label "/ 275" and "ADP (Non) 220" with a sub-label "/ 220". At the bottom, there are three buttons: "Clear Counters", "OK", and "Cancel".

Conditional Access Settings	
Mode	PowerVu ▼
ISE UA	000-506-8584-4
OSE UA	---
ADP (Enc) 275	/ 275
ADP (Non) 220	/ 220
<div>Clear Counters OK Cancel</div>	

MENU > Settings > CA

**IMPORTANT!** In Free-to-Air mode, the receiver ignores certain DVB system information tables. It does not recognize network frequency changes transmitted by the broadcaster.

### To change the CA (conditional access) mode:

In the list box, select the appropriate mode, PowerVu or FTA (Free-To-Air) and then select OK. The default setting is **PowerVu**.

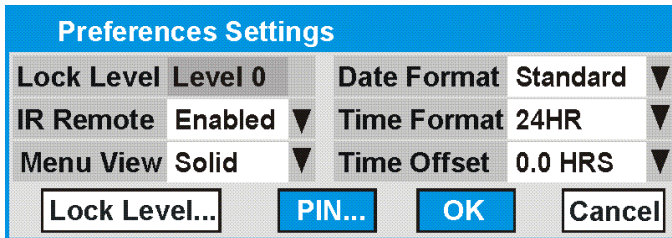
The other parameters on this menu are read-only. They indicate the ISE User Address, OSE User Address (when used) and whether the ADPs are encrypted or unencrypted.

### To reset the ADP counters:

Select **Clear Counters**. The ADP fields will reset to 0.

## Preferences

Use this menu to change user-related settings such as Local Time and Date, enabling the remote control and menu and setting the menu view.



Preferences Settings			
Lock Level	Level 0	Date Format	Standard ▼
IR Remote	Enabled ▼	Time Format	24HR ▼
Menu View	Solid ▼	Time Offset	0.0 HRS ▼
Lock Level...		PIN...	OK Cancel

*MENU > Preferences*

The configuration dialog boxes that are available from the Preferences menu are described in the following table:

Dialog box	Description
Change Lock Level	Restricts access and prevents unauthorized changes to receiver settings
PIN	Changes the password used to protect against unauthorized changes to receiver settings

## Changing the Lock Level

### Using lock levels

Receiver lock levels are password-protected. When an attempt is made to change the lock level setting, a password prompt is displayed. After the correct password is entered, you can change the lock level setting.

For example, if lock level 3 is currently set and MENU button is pressed, a pop-up window is displayed with a password prompt. After the correct password is entered, the Main Menu appears, and the receiver Lock Level is automatically set to Level 0.

If an incorrect password is entered (any lock level setting), the system displays a message to confirm an invalid password entry, and access to the Main Menu (in the case of lock level 3), or to the lock levels option is denied. A Password prompt also appears when changing the password.

Users cannot execute any locked-out function or configuration. When a user attempts to access a function that is locked out, the system dims the associated menu field.

### To display the Main Menu (at Lock Level 3):

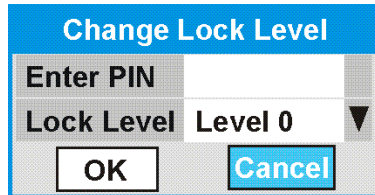
1. Select MENU.
2. In the password dialog box, enter the current password and select OK to display the Main Menu.
3. Menu options appear grayed-out if disabled by the current lock level setting.

Use this configuration dialog box to create tiered authorized access to the receiver's configuration settings and functions.

### To change the lock level:

1. In the password dialog box, enter the current password and select **OK**.

**IMPORTANT!** A video channel displayed for 20 seconds or more automatically becomes the current (Last) channel. Because lock Level 3 disables most lock level 0 functions (including channel changes), perform this action before changing the current Lock Level setting to 3).

A screenshot of the 'Change Lock Level' dialog box. It has a blue header with the title 'Change Lock Level'. Below the header, there is a section labeled 'Enter PIN' with a text input field. Below that is a section labeled 'Lock Level' with a dropdown menu currently showing 'Level 0'. At the bottom, there are two buttons: 'OK' and 'Cancel'.

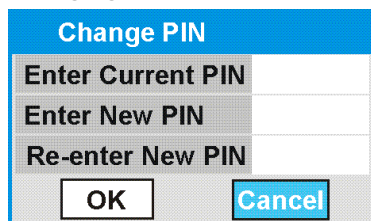
*MENU > Preferences Settings > Change...*

2. In the entry box, enter a valid lock level (Level 0, Level 1, Level 2, or Level 3) and then select **OK**. The default setting is Level 0.

An overview of the lock levels is provided in the following table:

Lock level	Description
0	All settings unlocked (receiver lockout disabled). Users can configure any setting.
1	All settings unlocked except Factory Reset and Password options. Users can configure settings that do not compromise the video signal.
2	All settings unlocked except Preset & LNB Setup and Audio/Video options. Users can configure settings that do not compromise the video signal.
3	All settings locked (access via password only). Users cannot configure RF inputs and RF presets.

### Changing the Password

A screenshot of the 'Change PIN' dialog box. It has a blue header with the title 'Change PIN'. Below the header, there are three sections: 'Enter Current PIN' with a text input field, 'Enter New PIN' with a text input field, and 'Re-enter New PIN' with a text input field. At the bottom, there are two buttons: 'OK' and 'Cancel'.

*MENU > Settings > Preferences > Change PIN*

Use this configuration dialog box to change the unique 4-digit lock level password that protects the receiver from unauthorized use of its functions and changes to its configuration.

To change the password, the receiver must be set to Lock Level 0.



**IMPORTANT** Record and keep the password in a secure location. The default password is **1234**. Proceed with extreme caution when changing the password as this operation cannot be undone. If the password is lost or is unavailable, contact your local service provider for assistance.

### To change the password:

1. In the Change PIN dialog box, enter the current password (four digits in the range from 0000 to 9999) and select **OK**. If you make an error or press the wrong button when entering the password, press **MENU** to cancel, and start again.

2. Enter the new password and then re-enter the new password again.
3. Select **OK** to save the (new) password.

### Changing the Menu View

The menus can be set to appear **Solid** such that video appears behind menus, or they can be set to **Clear**, such that video is visible through the menus.

Setting	Description
Solid	Menus are solid. Video appears behind menus.
Clear	Menus are clear. Video is visible through menus.

### Enabling or Disabling the Remote Control

The Model D9838 receiver is shipped with a remote control as a standard feature. It is shipped enabled to control the receiver. If you want to disable the remote control and use front panel control only, set this field to **Disabled**.

A pop-up window is displayed when you attempt to change this setting, warning the operator that Receiver control is through the front panel if IRD is disabled". Select **Yes** if you want to change the setting.

The default setting is **Enabled**.

**Note:** Functions such as record, local DVR fast forward, rewind, pause and stop are not available without the use of a remote control.

### Changing the Date Format

The default setting is **Standard**. Options are **US** and **Standard** with the following displayed format.

Options	Format
USA	month/day/year
Standard	year/month/day

### Changing the Time Format and Time Offset

Current day, date and time information is displayed in the top right corner of each menu and in the information banner at the top of the screen when making a channel change. Time information is normally broadcast as part of the transmitted digital signal, and is usually the broadcaster local time relative to GMT<sup>1</sup>.

**Time Offset** is displayed using a time zone offset instead of the true local time. If the current broadcast time is not your local time, you must change this time setting. It can be adjusted in half-hour steps from - **11.5 HRS** to **+11.5 HRS** to display your local time.

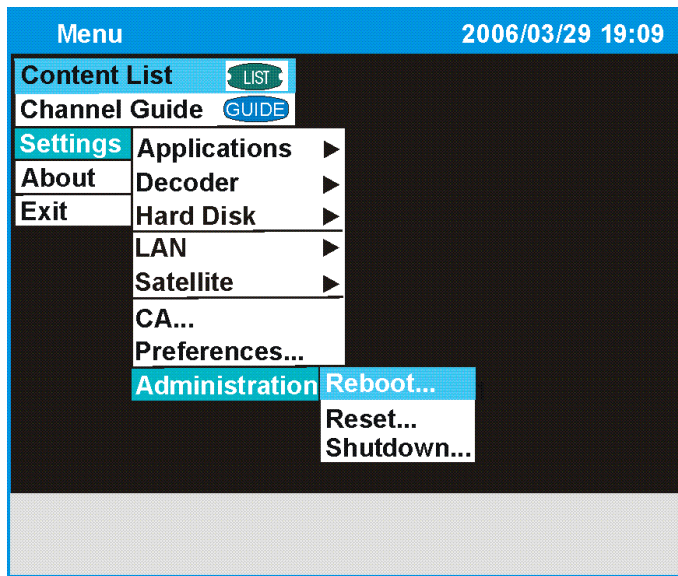
**Time Format** has two settings: **12HR** or **24HR**. The default setting is **24HR**. Change this to the desired format.

---

<sup>1</sup> Greenwich Mean Time



## Administration



*MENU > Settings > Administration*

Use this menu to either reboot the receiver or reset it to the factory default values.

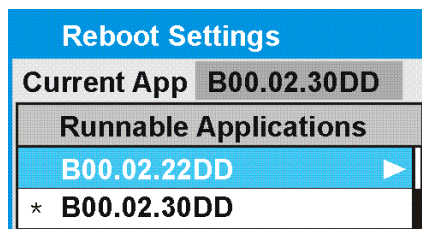
Dialog box	Description
Reboot Receiver	Restores the receiver to its normally operating state without changing receiver settings, or selects another application code.
Factory Reset	Restores the receiver to the factory default settings.
Shutdown	Safely shuts down the D9838 receiver and the internal Hard Disk Drive (HDD). The receiver will not automatically reboot or power-down after reaching the shutdown state. The power source must be physically disconnected.

### Rebooting the Receiver

Use this function to select the version of the application that will control the receiver, or restore the receiver to its normal operating state without having to change receiver settings or select another application code.

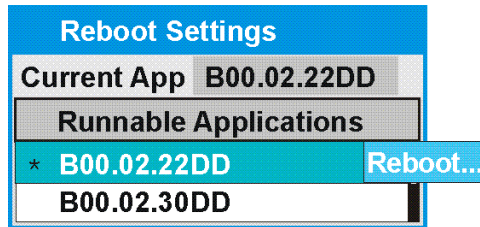
#### To reboot the receiver:

- I. Select Settings > Administration > **Reboot** to display the Reboot Settings application selection dialog as shown below.



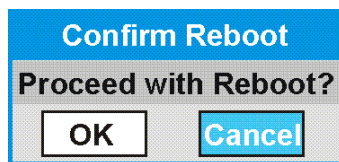
*MENU > Administration > Reboot*

2. In the Reboot Settings submenu, scroll to the appropriate runnable application version (if more than one), and then press the right arrow to display the flyout box.

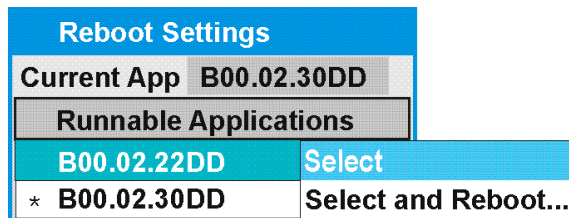


Note: A "\*" appears to the left of the currently selected application version.

3. Select **Reboot** in the flyout box as shown below if you want to reboot the receiver using the presently installed application.



4. When the confirmation dialog box is displayed, press **OK** to proceed with the reboot or press **Cancel** to abort the operation.
5. If you want to select another application choose **Select and Reboot** in the flyout menu as shown below. You will be asked to confirm your selection before the reboot operation is initialized as in step 3.



If you simply want to set the receiver to use another application version the next time the receiver is power cycled, choose **Select**. In this case, the "\*" will appear to the left of the selected application version. Press **Menu** to save the setting and return to the previous menu.

6. The App code version is displayed on the front panel while the receiver is rebooting. After a reboot, the receiver returns to the most recently viewed program.

## Performing a Factory Reset

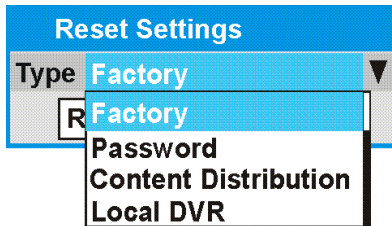
Use this configuration dialog box to restore the receiver to the factory-configured default settings. When activated, the current receiver settings are replaced by the default settings. After the factory defaults are restored, you can configure the receiver settings as required.

### To restore the factory-configured defaults:

1. Select Settings > Administration > **Reset** to display the Reset Settings dialog box as shown below.



2. Choose the desired type of reset, i.e., either Factory or a customer-specific type applicable to your receiver listed in this field.




Each of the Reset Settings options is described in the table below.

Options	Description
Factory	Resets all the parameters to their factory default settings.
Password	Deletes all of the previously set passwords.
Content Distribution	Deletes all the programs from the zBand partition including the Content Guide.
Local DVR	Deletes all the locally recorded programs.

3. Select **Reset**.
4. When the confirmation dialog box is displayed, select **OK** to proceed with the reset or choose Cancel to abort the operation.



5. Following a factory reset, the receiver returns to Standby mode.
6. To return to the Main menu, wait for the flashing front panel LED, and then press the **Power** button on the remote control or the  (On/Standby) button on the receiver front panel, followed by the **MENU** button.

## Performing a Shutdown

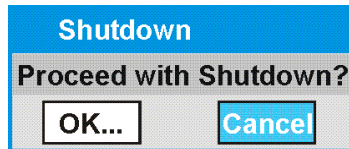
Use this configuration dialog box to perform a safe shutdown of the receiver.



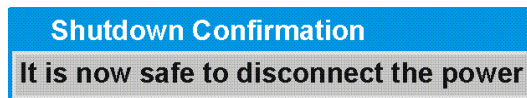
**IMPORTANT** Do not unplug power from the receiver without performing a safe shutdown; otherwise this could result in damage to the hard drive.

### To safely shutdown the receiver:

1. Select Settings > Administration > **Shutdown** to display the Shutdown dialog box as shown below.
2. When the confirmation dialog box is displayed, press **OK** to proceed with the shutdown or press **Cancel** to abort the operation.



3. Once shutdown has started, a message will be displayed on the screen indicating shutdown is in progress, followed by the message shown below:



This Shutdown Confirmation message indicates that the shutdown process is complete. The receiver shutdown process takes less than 30 seconds.

4. You can now disconnect power from the receiver.

**Note:** The message "bye" will be displayed on the receiver front panel when the shutdown process is complete.

## About menu

About	
Model	D9838
Current App	N00.02.16.07
Safe App	B00.02.00PS
ISE UA	000-506-8584-4
<div>Diagnosics... Details... OK</div>	

*MENU > About*

Use this read-only display menu to view detailed information about the receiver software.

## Details

Details			
Software Versions		Hardware	
Current	B00.02.24DD	Model	D9838
Safe	B00.02.22DD	Board	NR NRC
Boot	3.00		Rev 2
CD	4.5.3.0948k	CPLD	E01.00.01
Identification		KBD	2.01
Host	D9838-506-8584	ISE	3.03(2)
ISE	000-506-8584-4	OSE	- - -
OSE	- - -		
<div>OK</div>			

*MENU > About > Details*

Use this read-only display menu to view detailed information about the receiver hardware and software.

**Note:** “CD” refers to the (Content Distribution) zband client revision.

## Diagnostics

Diagnostics				
General			Signal	
Power-on	146	Hrs	Lock	Yes
Resets	53		Quality	10
Disk OK	Yes		Level	44
RAM	128	MB	CEC	0
RAM Used	38	MB	UEC	0
Video Rate	2.457036	Mb/s	BER	0.0E-8
Audio Rate	192.0	Kb/s		
IP Rate	0.0	Mb/s		
CPU Load	24	%		
				OK

*MENU > About > Diagnostics*

Use this read-only display menu to monitor information about the received signal and the receiver in general.

# CHAPTER 4

## Storing Data and PC Media Files

The D9838 receiver provides a content guide to configure the system to store data and PC media files that are available on your network.

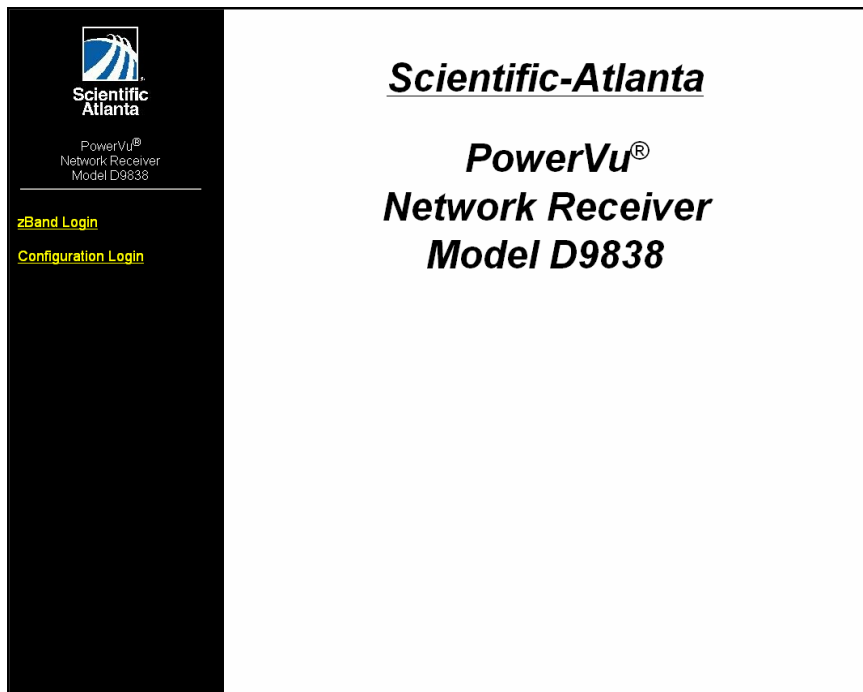
### Starting the D9838 Content Guide

The D9838 Content Guide runs in a standard Web browser.

#### To open the Content Guide in a Web browser:

1. Obtain an IP address from your IT administrator that does not conflict with any other communications devices on the network.
2. Enter the new IP address in the IP Address, (Subnet) Mask and Gateway fields.
3. Enter and save the new IP address, (Subnet) mask and Gateway fields.
4. The receiver will prompt you to reboot once the changes have been made. Select **OK** to confirm the reboot operation. The system activates the new network settings.
5. From your computer, start the Web browser and enter the receiver IP address. The system displays the D9838 Web interface when browsing to **http://d9838\_IPAddress** in a Web browser.

**Note:** d9838\_IPAddress is the actual IP address of the receiver as set in steps 2 and 3 above.



The D9838 Web interface provides access to the following two utilities:

- The D9838 Content Guide via the zBand Login
- The D9838 configuration and status menus via the Configuration Login

6. For information on how to control the D9838 receiver using the Configuration menus, see Using the Web Interface on page 13.  
On the Network Password screen, enter the User Name and Password as follows:  
User Name – user (all lowercase letters)  
Password – USER ( all uppercase letters)
7. The system displays the D9838 Content Guide.



The Content Guide includes three tabs. These are the D9838 workspaces, as described in the following table:

Tab	Description
Programs	Displays a list of programs and subprograms, scheduling information, status and the rotation name, if any. You can set delete or launch a program.
Statistics	Lists client statistics and logging information. You can have this page refresh at a regular interval.
Config	Lists the configuration options that are most likely to require changes. You need to be logged in as an administrator to view information on this tab. This tab provides access to configuration parameters which open a page that allows you to edit a parameter's value.

## Statistics and configuration

**To review the D9838 Content Guide and logging information:**

1. From the Content Guide, select the **Statistics** tab.
2. In the Refresh this page every list, select the interval that will be used for refreshing this Web page.
3. Click the green **Start** button. A red Stop button will appear.

Statistics are displayed at the top of the page under the Statistic/Log tab. The log displays the activities that are occurring on the client.

## Launching a program

When a program has been completely received or if a stream program is incoming, the program name becomes an active hyperlink.

To launch the program, click the name of the program.



# APPENDIX A

## Customer Support

### Hotlines

Scientific-Atlanta provides customers with 24-hour hotline support from anywhere in the world. If you require technical assistance or product training support, or if you have any questions concerning your Scientific-Atlanta product, contact the appropriate Customer Support Center from those listed below.

Location	Phone Number
USA and Canada (Toll free)	888.949.4786
USA and Canada	+1.770.236.4786
United Kingdom and Europe	+44.8708.325.420
Asia	+852.2522.5059

**Note:** As the needs of our customers change, our support options change, as well. For the most up-to-date support contacts and numbers, please check our support Website:

<http://www.sciatl.com/contactus/customersupport.htm>

Media Networks 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 your Scientific-Atlanta product. Customer Support Centers also provide the following pre- and post-sales support services for Scientific-Atlanta products.

### Training support

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

#### Warranty and Post-Warranty Support

Warranty and post-warranty support services are available to help you return Scientific-Atlanta products for service or repair.

### Customer responsibility

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

At the customer's request, Scientific-Atlanta 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 a fault

If an equipment fault develops, perform the following steps.

Notify Scientific-Atlanta 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.

On receipt of instructions, return the product by prepaid freight. If the product or fault is not covered under warranty, Scientific-Atlanta will provide an estimate of repair charges in advance of any work performed.

### **Returning the product**

To return any Scientific-Atlanta product for repair or replacement, follow the steps below. To be eligible for credit, a Return Material Authorization (RMA) number must accompany each product returned to Scientific-Atlanta. This number can only be obtained from your local Scientific-Atlanta Customer Support Center in advance of product return. Be sure to include this number in all correspondence.

Telephone your regional Customer Support Center or fax Scientific-Atlanta and request a Return Material Authorization for product return.

Tag or label the product with the following information:

- Your name and full return address
- Telephone contact number
- RMA number
- Sales order (if available)
- Purchase order (if available)
- Date the product was received
- Brief description of problems

Repackage the product using the original carton and packing materials, if possible. If the original packaging is not available, repackage the product using a suitable corrugated carton (or similar shipping container). Be sure to wrap the product in sufficient protective packaging to prevent damage to the equipment during shipment.

Print or attach the following information on the outside of the carton or shipping container.

- The full shipping address
- Your name, your business name and full return address
- Contact telephone number
- RMA number

Ship the product prepaid and insured to the Scientific-Atlanta Customer Support Center (or other repair location) as directed. If you are unsure about where to ship the product, contact your local Scientific-Atlanta Customer Support Center, Scientific-Atlanta dealer or distributor. Note: Scientific-Atlanta does not accept freight collect. Be sure to prepay all return shipments.

# APPENDIX B

## Specifications

### System specifications

Feature	Description	
System	MPEG-2/DVB Compatible EN 300 421, EN 300 468	De-modulation: QPSK FEC: Variable (1/2, 2/3, 3/4, 5/6, or 7/8)
Tuner	Symbol Rate Range: 1.0 to 45 Msymbols/s Input Level: -35 dBm to -65 dBm per carrier (< 5Msym) -25 dBm to -65 dBm per carrier (> 5Msym) Frequency Range: 950 MHz to 2150 MHz Tuning Step Size: 125 kHz	Carrier Capture Range: ±3.0 MHz (5-45 Msym) Satellites: C-band and Ku-band Impedance: 75Ω
Video/Audio Outputs	<b>Analog Video Output</b> <b>Number of Channels:</b> One <b>Connector Type:</b> RCA <b>Video Decompression Type:</b> MPEG-2 4:2:0 <b>Level:</b> 1.0Vpp ±10% <b>Video Standard:</b> NTSC & PAL B/G/I/D/M/N  <b>Composite video</b> <b>S-video</b> <b>Component video</b> (Y, Pb, Pr)	<b>Analog Audio Output</b> <b>Number of Channels:</b> One stereo pair/two mono channels <b>Connector Type:</b> RCA <b>Audio decompression:</b> MPEG or Dolby Digital (AC-3) <b>Output Level:</b> Unbalanced, 2Vrms ±10% at 0 dBFS <b>Digital Audio S/PDIF Output</b> <b>Connector Type:</b> RCA For Dolby Digital audio only
VBI	NTSC lines 10 to 22 fields 1 and 2 NABTS, AMOL I and II (Nielsen)	PAL lines 7 to 22 fields 1 and 2 Teletext, WSS, VPS
Data Outputs	RS-232 asynchronous data at rates up to 38.4 kb/s <b>Rates:</b> 300/1200/2400/4800/9600/19,200/38,400 b/s	<b>Ethernet Output for IP data</b> RJ-45, 10/100BaseT, up to 15 Mbps
Remote Control	<b>SNMP v2</b> <b>Web Interface</b>	<b>Ethernet Output</b> RJ-45, 10/100BaseT
Other Outputs	<b>Remote Control outputs</b> <b>Number of Outputs:</b> 4 <b>Type:</b> Open Collector	
Hard Drive	160 GB	
Environmental/Physical	<b>Operating Temperature:</b> 5°C to 45°C (41°F to 113°F) <b>Storage Temperature:</b> -20°C to 65°C (-4°F to 149°F)	<b>Physical Dimensions:</b> 3.0 in. H x 17.0 in. W x 10.5 in. D (7.6 cm H x 43.2 cm W x 26.7 cm D)  <b>Weight:</b> 8 lbs (3.6 kg) approx.

Feature	Description	
Power	<b>Voltage Range:</b> 100 V to 240 V AC <b>Line Frequency:</b> 50/60 Hz	<b>Power Consumption:</b> 50 W max. <b>LNB Power on satellite input:</b> +13 V/+18 V @ 350 mA max.

## Ordering information


Part No.	Description
4009611	D9838 Network Receiver with NTSC CH3/4 TV Modulator
4012609	D9838 Network Receiver with PAL TV Modulator


# APPENDIX C

## Troubleshooting

If you experience any problems operating your satellite receiver, check the troubleshooting tips included in this appendix. If you are unable to resolve your problem after consulting this Troubleshooting checklist, contact your local service provider for assistance, or contact your Scientific-Atlanta Customer Support Center.

Note that temporary, solar-related electromagnetic disturbances occur every year during the spring and autumn months. Your service provider should advise you about certain channels that may be adversely affected by these disturbances, which typically persist for several minutes each day for approximately one week during this period.

	Problem	Possible causes	What to do
1	Blank screen (TV switched on)	Normal operation if receiver is not switched on.	Press the  button on the receiver front panel, or press the POWER button on your remote control.
2	Scrambled channel (not decoded)	Your subscriber services may not be authorized for the channel.	Check that your subscriber services are currently authorized (contact your local services provider).
3	Cannot access a password protected on-screen option	You have not entered the correct password, or the password may be changed	Check that you are using the correct password (if you've lost the password, or the password is unavailable, contact your local
4	Remote Control not operating properly	The remote control may be defective, or the batteries are incorrectly installed, or require	Replace or correctly install the remote control batteries.
		The IR Remote input setting might be turned off on the receiver.	On the Administration menu (MENU > Settings > Advanced > Administration), set the IR Remote field to Enabled.
5	No signal present (unit switched on) and/or No Signal message is displayed	Installation problem.	Check that all satellite/antenna/video and other cables are properly connected.
		Signal problem.	<ul style="list-style-type: none"> <li>Check that your satellite antenna (dish) is properly aligned.</li> <li>Check that the correct installation settings are being used, that an adequate signal level is present and that receiver operating status being reported.</li> <li>Check that the TV is set to the correct channel for receiving satellite signals via your TV tuner/converter as set on the Audio/Video Setup menu.</li> </ul>
		Local heavy precipitation is falling.	Normal operation should resume after the precipitation has stopped.

	Problem	Possible causes	What to do
		Subscriber services are not authorized.	Check that your subscriber services are currently authorized.
6	Program Not Authorized message is displayed	Subscriber services are not authorized for the selected channel.	Check that your subscriber services are currently authorized by displaying signal status information on the Dish Setup menu (or contact your service provider).
7	Authorization Key Not Received message is displayed	Subscriber services are not authorized due to authorization key not being received.	As above.
8	Blackout message is displayed	Subscriber services are not authorized due to local blackout	As above.
9	Blank (black) screen is displayed after exiting to video from menus	Channel 0 displayed after exiting to video following changes made to the current receiver setup.	Press the CH ↑ or CH ↓ button on your remote control to display virtual channels.
10	Poor reception	The antenna, video and/or audio cables may be faulty or not properly connected.	Check the connections to and from the satellite antenna LNB, television antenna, and all video and audio cables (see Quick Setup for details).
		The receiver is not properly set up to receive the satellite signal.	Check that the network parameters on the receiver are accurate.
		Possible station trouble. The signal source for one or more (or all) channels is temporarily affected by technical transmission problems or a temporary solar disturbance.	<ul style="list-style-type: none"> <li>▪ Check another channel or channels to compare signal reception.</li> <li>▪ Contact your service provider.</li> </ul>
		The satellite antenna (dish) may not be properly installed or is not accurately aimed at the satellite signal.	Check that a minimum Signal Level of 40 is achieved or displayed when aligning the dish.
11	No picture, no sound	The receiver is not turned on or the receiver is not properly connected to AC power.	<ul style="list-style-type: none"> <li>▪ Press the  button on the receiver front panel, or press the POWER button on your remote control.</li> <li>▪ Check that your satellite receiver is properly connected to AC/power.</li> </ul>
		Your antenna, video and/or audio cables may be faulty or not properly connected.	Check the connections to the satellite antenna LNB, television antenna, and all video and audio cables.
		Possible station trouble (the signal source for one or more (or all) channels is temporarily affected by transmission problems or due to a temporary solar disturbance.	Check another channel to compare signal reception.

	Problem	Possible causes	What to do
12	Picture OK, no sound	You have muted the sound.	<ul style="list-style-type: none"> <li>Check that volume is not muted by pressing the VOL ↑ or VOL ↓ button on the remote control..</li> <li>Check another channel to compare signal reception.</li> <li>See the previous item in this table for details.</li> </ul>
13	Sound OK, poor picture		<ul style="list-style-type: none"> <li>Check another channel to compare signal reception.</li> <li>See the previous item in this table for details.</li> </ul>
14	Cannot connect to the Web interface	The IP address might be misconfigured on the client computer.	Check that the IP address, subnet mask, and default gateway values are set correctly on the receiver.

## Frequently asked questions

Question	Answer
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.
Why must the TV monitor be tuned to a specific channel (RF modulator)	Your satellite receiver provides a television signal to your TV tuner over a frequency that corresponds to specific channels (channels 3 or 4 for NTSC [M/US] standard or channels 28 through 47 for PAL standard). Your local service provider can identify the correct TV tuner and TV channel setting to use (set on the Audio/Video Setup menu).
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.
If more than one TV monitor is available, can the Satellite receiver be used to watch different channels on each TV monitor?	No. To do this you require a separate receiver for each TV monitor.
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.





# APPENDIX D

## Compliance

### Safety

The PowerVu Model D9838 Network Receiver has been approved for safety by the Standards Council of Canada and the OHSA (NRTL) accredited testing laboratory to the following standards:

CAN/CSA C22.2 No. 60065-03

UL 60065 Ed 7, 2003

Also, this product has been evaluated under the IECCEB scheme to the following International standard:

IEC 60065:2001 (7<sup>th</sup> Edition) including country differences as outlined in CB Bulletin 107A.

Also see the EU Declaration of Conformity at the end of this section.

### EMC

This equipment has been tested and found to comply with the limits for a TV Interface device and Class B digital device according to Part 15 of 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.

- Reorient or relocate the television receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment to an AC outlet on a circuit different from that to which the receiver is connected
- 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 (e.g., TV monitors, terminals, data sources, 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.

The manufacturer is not responsible for any radio or TV interference resulting from unauthorized modification of this equipment. It is the responsibility of the user to correct such interference at the user's expense.

## 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 Industry Canada.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de Class B prescrites dans le reglement sur le brouillage radioelectrique edicte par Industrie Canada.

This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained.

# Scientific Atlanta

A CISCO COMPANY

Scientific-Atlanta Europe NV  
Luipaardstraat 12  
8500 Kortrijk  
Belgium

## Declaration of Conformity

**CE MARKING 05**

**The Product** PowerVu® Network Receiver

**Reference or Model Number** D9838

**Rating** 100-240 VAC 1.0 A 50/60 Hz

**Has been designed and manufactured in accordance with the following Harmonised Standards:**

Number and Date of Issue	Title of Standard
EN 60065: 2002	- Safety requirements for mains operated electronic and related apparatus for household and similar general use
EN 55013:2001 / A1	- Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement
EN 55022: 1998 Class B	- Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Devices
EN 50024: 1998	- 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)

**According to the provisions of the Low Voltage Directive 73/23/EEC and the Electromagnetic Compatibility Directive 89/336/EEC amended per Directive 93/68/EEC**

Toronto, Canada, Dec. 14, 2005

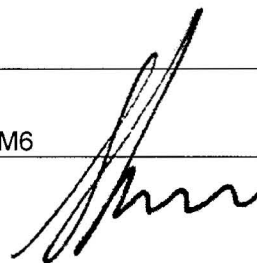
(Issue place and Date)

Scientific Atlanta Canada Inc (Media Networks Division)

(Company name)

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(Company Address)



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