General Instrument

MAGNITUDE®

SR-3200 Commercial Receiver/ Decoder User's Guide

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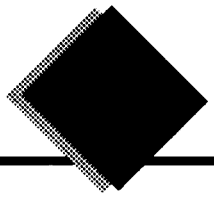

Preface

About this Guide

This guide shows you how to set up and operate Magnitude® SR-3200 Commerical Receiver/Decoder.

Conventions

The following conventions are used in this guide. Please take a moment to review them.

`Courier` font represents messages on the decoder's LCD screen.

Boldface Helvetica font indicates the text you enter to follow procedures illustrated in this guide.

Italics are used for book titles, variable names, and emphasis.

Definitions

PID Packet Identification, a descriptor in an MPEG-2 transport stream that indicates the specific program data stream to which the current data packet belongs

Power-cycle To generate a hardware reset by turning the unit off and then turning it back on again

Power-up To apply power to the unit by attaching the unit to a power source and switching the power switch to the | ("On") position

Soft Key A context-specific key that takes on a different function depending on the current menu

Safety

This unit has been tested and complies fully with the following standards: IEC 950, UL 1950 and UL1250.

This section discusses important safety instructions and safeguards. For starters, you are reminded to:

1. Read Instructions — All safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions — The safety and operating instructions should be retained for future reference.
3. Heed Warnings — All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions — All operating and use instructions should be followed.

The power modules installed in the chassis use 110 VAC and 220 VAC electrical power. Take all normal precautions to prevent harm to personnel or damage to equipment.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void your authority to operate the equipment. Use of cables other than those provided by the manufacturer may cause noncompliance with FCC and European Norm.

There are no operator serviceable parts inside the chassis. Turn off the power and remove the power cable and interconnect cables before servicing.

Bolt unit to a rack, which should be secured to a wall or the floor.

Do not stack electronic components or other objects on top of this unit. The slots on top of the unit must be left uncovered to allow proper airflow to the unit. Blocking the airflow to the unit could impair performance or damage your receiver and other components.

Do not stack this unit on top of a "hot component" such as an audio power amplifier.

Do not defeat the safety feature of the plug. The wire blade fits into the wall socket only one way. If you need an extension cord, make sure it matches the plug of the receiver/decoder.

Accessories

Do not place this product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

Installation

Power Sources — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

Specification Limits — Use only within specification limits (AC 100-120/200-240V; 05-0.4 A; 50-60 Hz; 0-40° C Ambient Temperature)

Grounding or Polarization — This product should be equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin.

The 3-wire grounding type plug will fit into a grounding type power outlet. This is a safety feature. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

Power-Cord Protection — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them; pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

Overloading — Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

Water and Moisture — Do not use this product near water — for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

Ventilation — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instruction have been adhered to.

Object and Liquid Entry — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

Servicing — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified technical support personnel.

Servicing

Damage Requiring Service — Unplug this product form the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen, into the product.
- If the product has been exposed to rain or water.
- 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 other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operations.
- If the product has been dropped or the cabinet has been damaged.
- When the product exhibits a distinct change in performance — this indicates a need for service.

Replacement Parts — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Safety Check — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Radio Interference

This unit has been tested and fully complies with the following standards: EN55022/CISPR22 and FCC part 15 Class "A" for electromagnetic emission interference and EN50082-1 for electromagnetic susceptibility.

1 About The SR-3200 Receiver/Decoder

This chapter introduces the SR-3200 Commerical Receiver/Decoder.

Overview

The SR-3200 Commercial Receiver/Decoder processes compressed audio/video program material carried in an MPEG-2 transport stream and generates signals for display on NTSC or PAL televisions and monitors.

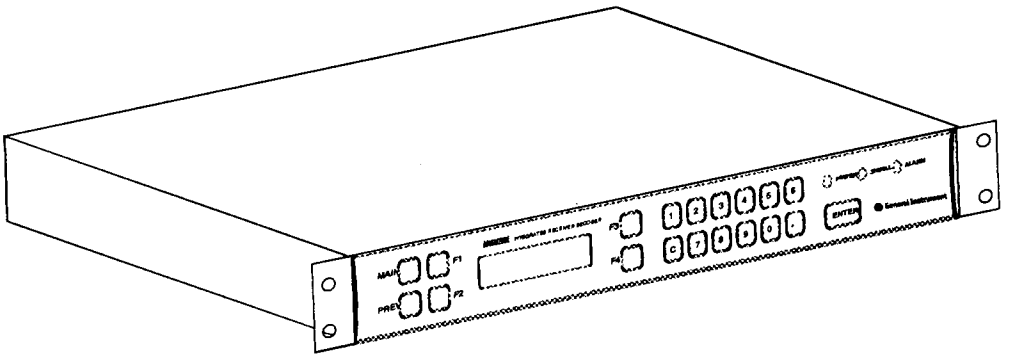

Figure 1-1 Magnitude® SR-3200 Commerical Receiver/Decoder

SR-3200 features include:

- **MPEG-2/DVB Compliant** Meets MPEG-2/DVB audio and video standards
- **Conditional Access** Supports a BasiCrypt™ renewable access control system using a smart card
- **Copy Protection** Supports Macrovision copy protection for video services
- **Virtual Channel** Defines a subset of programming within a multiplexed stream (for blacking out, mixing in a localized audio stream, etc.)
- **Multi-Audio Capability** Allows separately selected audio with each video service
- **Closed Captioning** Supports transmission of closed captions with the MPEG-2 elementary stream
- **Data Ports** Includes high speed data port (transport packets, PES packets, or elementary streams) and low speed data port (for remote control or diagnostic functions)
- **LCD Interface** An easy-to-use control panel

- **Sofware Downloading** Supports software upgrades without loss of user data
- **Channel Recall** Always saves the last channel selected in non-volatile memory

The SR-3200 Receiver/Decoder's physical features are as follows:

- **Power Input** 100-240 VAC, via 3-conductor IEC cable
- **User Input** Front panel keyboard
- **User Messages** LCD display
- **Signal Input** QPSK
- **Signal Output** One stereo audio channel, composite video
- **Dimensions** 19" wide x 1.75" (1U)
- **Environmental** 0 to 40°C 0 to 90% humidity non-condensing

Component Checklist

The SR-3200 kit includes the following components:

- Decoder box
- IEC power cable
- Rack mount hardware
- *SR-3200 Commercial Decoder User's Guide*

Required Cables

The SR-3200 Receiver/Decoder requires the following cables:

- Network interface cable (50Ω coaxial cable with male F-connector)
- Video output cable (with BNC adapter)
- Audio output cable with ferrite

Setting Up The SR-3200 Receiver/Decoder

This chapter shows you how to set up the SR-3200 Commercial Receiver/Decoder.

About Setting Up

This chapter shows you how you to connect the SR-3200 Receiver/Decoder to:

- The power source
- The MPEG-2 data stream: Network or provider
- Baseband audio/video equipment
- High- and low-speed data sources

All connections are made via the rear panel of the unit, as shown in Figure 2-1.

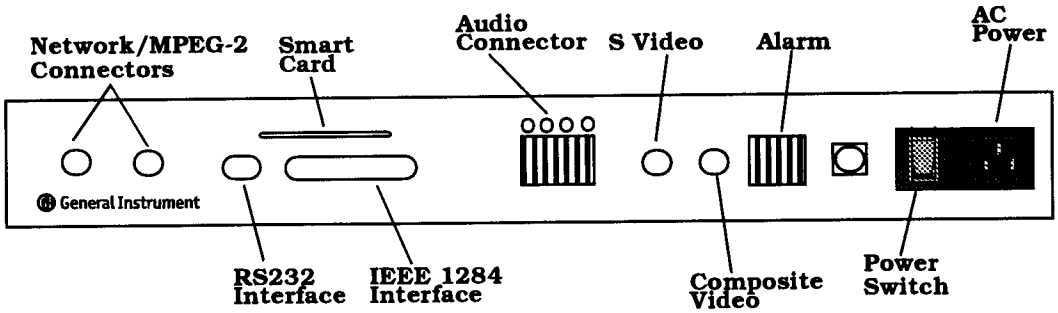

Figure 2-1 SR-3200 Commerical Receiver/Decoder Rear Panel

Connecting to a Power Source

The SR-3200 Receiver/Decoder receives its power via a 3-conductor (hot/neutral/ground) IEC connector on the rear panel.

- Connect the SR-3200 to a power source that provides AC power within the following ratings: AC 100-120/200-240V, 60/50 Hz, 0.5/0.4A, 50-60Hz.

Connecting to the MPEG-2 Data Source

The SR-3200 Receiver/Decoder has connectors for Network.

- Using an appropriate cable, connect the Network or port to the MPEG-2/DVB source.

Connecting to Baseband Equipment

The SR-3200 Receiver/Decoder stereo audio, composite, and S-video outputs correspond to the connectors labelled **AUDIO** and **COMP VIDEO**, and **S-VIDEO**.

1. Connect audio equipment to the SR-3200 Decoder by inserting wires into the terminal blocks labelled **AUDIO** (**LEFT** and **RIGHT**). One wire inserts into the **+** and the other into the **-**.
2. Using the 50Ω coaxial cable with a BNC connector, cable the **COMP VIDEO** connector to the video target (i.e. television, modulator etc.).
3. With the **S-VIDEO** connector, cable to the corresponding **S-VIDEO** target (Television, VCR, etc.).

Connecting the Optional Data Ports

The SR-3200 Receiver/Decoder has a DB9 connector labelled **RS232** and a DB25 connector labelled **IEEE 1284** jack for low-and high-speed data ports.

Operating the SR-3200 Receiver/Decoder

This chapter describes how to operate the SR-3200 Commercial Receiver/Decoder.

Front Panel Controls and Indicators

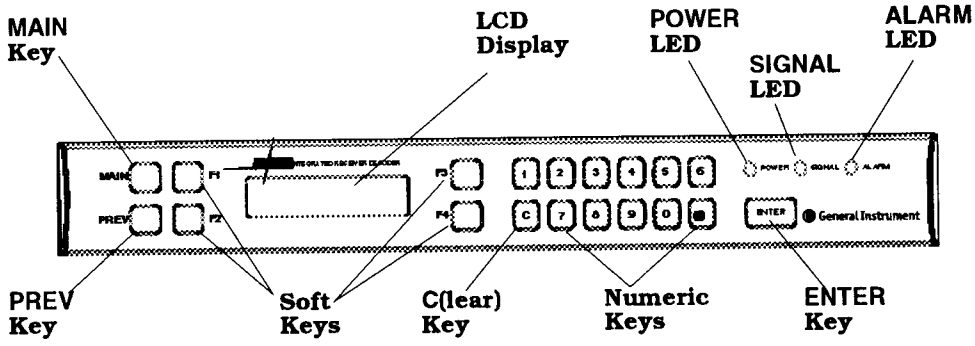

Figure 3-1 SR-3200 Commercial Receiver/Decoder Front Panel

About the LEDs

The three LED's provide the following status information:

- **POWER** (green) Indicates that the unit is receiving power
- **SIGNAL** (amber) Indicates that the unit has carrier log
- **ALARM** (red) Indicates that the unit has detected a fault condition

About the Keys

The keys on the front panel allow you to select functions from the series of menus displayed on the LCD and enter parametric data. The nineteen keys fall into three categories:

- Menu Navigation/Selection
- Numeric Input
- General Function

Menu Navigation/Selection Keys

- Use the **MAIN** key to return to the top-level menu
- Use the **PREV** key to return to the last menu displayed before the current one.

- Use blue keys **F1** through **F4** as soft keys to select functions displayed on the LCD. Each key controls several functions, depending on which menu you select. At any time, the function associated with a key is indicated by LCD text and an arrow symbol (<- or ->) pointing to the appropriate soft key.

Numeric Input Keys

- Use the numeric keys **0** (zero) through **9** (nine), and **.** (the decimal point) to enter data

General Function Keys

- Use the (clear) **C** key to delete incorrectly entered numerical data
- Use the (green) **ENTER** key to confirm the input of numerical data

About Operating Modes

The operating mode is a function of the content of the data contained in the MPEG-2 transport stream that the SR-3200 Receiver/Decoder is receiving. If the transport stream contains audio/video material, the unit decodes and displays that material, generating analog audio and video output.

There are two operating modes: DVB (Digital Video Broadcast) mode and PID (Packet Identifier) mode. You can use either mode to select program streams as well as the parameters that control each program. In DVB mode, changing transport streams is easier than in PID mode. Selecting between these modes is described below.

Powering Up the Unit

After you cable the system and connect the AC power:

- Turn on the unit by turning flipping the on/off switch located on the rear panel to the **I** position.

This lights the green **POWER** LED on the front panel, indicating that the unit is receiving power. The LCD displays the following message:

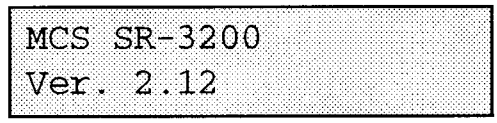

Figure 3-2 Initialization Screen

Note The `Ver.` is the software release number and may vary.

After the SR-3200 Receiver/Decoder successfully completes the internal initialization and self-test routines, the LCD displays information from the mode (DVB mode or PID mode) that was operative when the unit was last powered down.

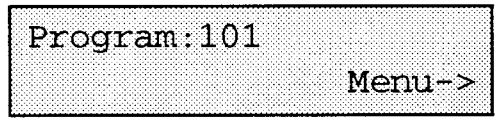

Figure 3-3 Initial Program Screen

When you see the Initial Program screen, the SR-3200 Receiver/Decoder is in DVB mode, decoding program material using the selected service ID (for example, Program 101), generating the appropriate audio and video output signals. Valid service IDs are 0 through 65,535.

When you see the Initial PID screen, the SR-3200 Receiver/Decoder is in PID mode, decoding program material using the selected PID (for example, video PID 64), selects the appropriate video output signals. Valid PIDs are 0 through 8,191.

Figure 3-4 Initial PID Screen

- Select Menu

This displays the top-level menu as shown in Figure 3-5.

Figure 3-5 Top-level Menu Screen

To access other functions described below, you select from the top-level menu items as desired using the blue soft keys.

Selecting DVB Mode

In DVB mode, you use the LCD menu display and front panel controls to select program streams. The sections below show you how.

To select DVB mode:

- Choose `Prog` from the top-level menu as shown in Figure 3-5.

Selecting a Program Stream

To select a program stream:

1. Select `Prog` from the top-level menu as shown in Figure 3-5

   This displays the `Program` menu as shown in Figure 3-6.

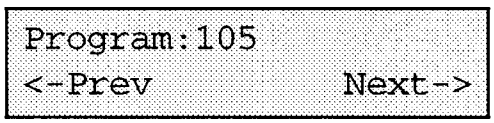

Figure 3-6 Program Menu Screen

2. Select `Next` or `Prev` to select a program stream with an assigned number higher (`Next`) or lower (`Prev`) than the program stream currently displayed (`105`). Or use numeric keys to select a program and then press **Enter**.

If the SR-3200 Receiver/Decoder finds the program, the following screen is shown:

```
Starting MPEG...
```

If there is no program stream that corresponds to your requested selection, the following screen is shown:

```
Program not found...
                Done->
```

Selecting PID Mode

PIDs identify MPEG data streams. This is important because an MPEG-2 transport stream usually contains more than one data stream; each data stream represents a distinct stream of MPEG-2 program material. For example, a transport stream carrying a single video picture and a single stereo audio channel contains at least two data streams: one for the video picture and one for the stereo audio channel. These multiple data streams are transmitted in the form of packetized data. The PID (Packet IDentifier) acts as a label indicating the data stream to which each packet belongs. Valid PID values are from 0 through 8,191.

Using the PID menu, you can change the value of the PIDs that the SR-3200 Receiver/Decoder associates with the video data stream, the audio data streams, and the PCR data stream. (The PCR is the program clock reference signal by which the audio, video, and data streams are synchronized.) Before changing PID values, you may wish to set the tuner frequency to support the changes you wish to make. See ➲*Changing Tuner Frequency*.

To select PID mode:

- Select `PIDS` from the top-level menu as shown in Figure 3-5.

This displays the PIDS menu as shown in Figure 3-7.

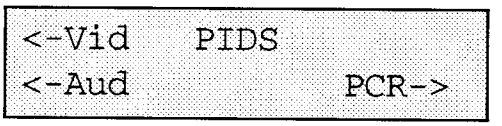

Figure 3-7 PIDS Menu Screen

Follow the procedures in the sections below to select PIDs.

Selecting Video PIDs

To set the Video PID:

1. Select Vid from the PIDS menu shown in Figure 3-7.

   This displays the Video PID menu as shown in Figure 3-8.

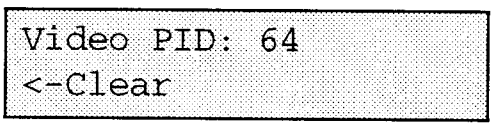

Figure 3-8 Video PID Screen

2. Use the numeric keys to set or change the Video PID as needed, then press **Enter**.
3. Select Clear to delete or clear the PID and stop the video.

Selecting Audio PIDs

To set the Audio PID:

1. Select Aud from the PIDS menu shown in Figure 3-7.

   This displays the Audio PID menu as shown in Figure 3-9.

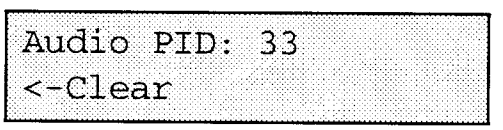

Figure 3-9 Audio PID Screen

2. Use the numeric keys to set or change the Audio PID as needed, then press **Enter**.

3. Select `Clear` to delete or clear the PID and stop the audio.

Selecting PCR PIDs

To set the PCR (Program Clock Reference) PID:

1. Select `PCR` from the `PIDS` menu shown in Figure 3-7.

   This displays the `PCR PID` menu as shown in Figure 3-10.

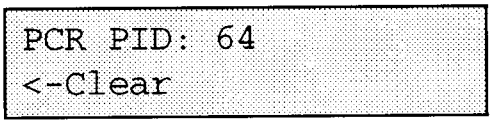

Figure 3-10 PCR PID Screen

2. Use the numeric keys to set or change the `PCR PID` as needed, then press **Enter**.
3. Select `Clear` to clear and deactivate the PCR.

Checking Status

The SR-3200 Receiver/Decoder displays the status of the software version, alarms, and signals. To check the status of these parameters:

- Select `Status` from the top-level menu as shown in Figure 3-5.

  This displays the `Status` menu as shown in Figure 3-11.

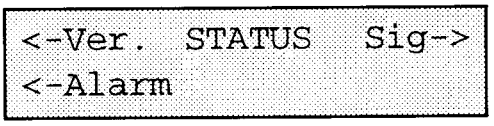

Figure 3-11 Status Menu Screen

Then follow the procedures in the sections below.

Checking the Software Version

To display the version of SR-3200 Receiver/Decoder software that is running:

- Choose `Ver` from the `Status` menu.

This displays the Version screen as shown in Figure 3-12.

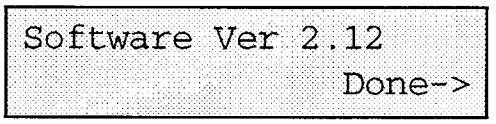

Figure 3-12 Version Screen

Checking Alarm Status

Alarms are events that interfere with signal reception. The following alarms may occur:

- No RF Carrier Lock
- No Home Transponder Found
- Home Transponder Checksum Invalid
- Demod BER Warning
- DEMOD BER Critical
- MPEG Stalled
- No Alarms Found

To display current alarm information:

1. Choose Alarm from the Status menu.

   This displays the Alarm menu as shown in Figure 3-13.

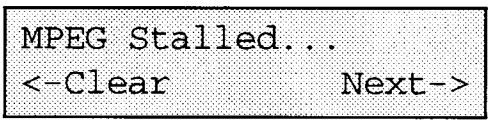

Figure 3-13 Alarm Menu

2. Select Clear to attempt to clear the displayed alarm.

   Note that some alarms, such as No RF Carrier Lock, cannot be cleared without first fixing the problem that tripped the alarm.

3. Select Next to show any additional alarms.

Checking Signal Status

To check signal status:

1. Choose Sig from the Status menu.

   This displays the Signal menu as shown in Figure 3-14.

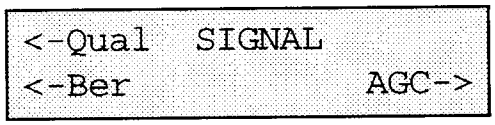

Figure 3-14 Signal Menu

2. Select Qual to show signal quality parameters as shown in Figure 3-15.

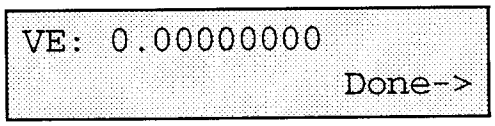

Figure 3-15 Signal Quality Screen

   The VE is Viterbi Bit Error Rate, an inner convolutional code used for forward error correction. The Viterbi rate is expressed in number of errors per million bits. This parameter indirectly measures the smoothness of the flow of program signal.

3. To exit the test, select Done.
4. Press the **Prev** button to return to the Signal menu as shown in Figure 3-14.
5. Select Ber to show the relative signal strength as shown in Figure 3-17.

Figure 3-16 Signal Strength Screen.

   Note that a relative signal strength of 0 is bad and 100 is best.

6. To exit the Signal Strength screen, select Done.

7. Select AGC to show the automatic gain control as shown in Figure 3-17.

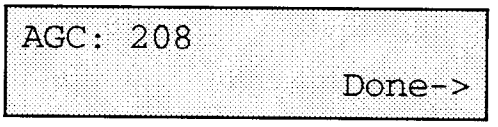

Figure 3-17 Signal AGC Screen

Note that the higher the AGC value, the better. The range is 0 through 255. If the AGC is 0 or 255, a possible signal problem exists.

8. To exit the test, select Done.

Setting the Volume

The SR-3200 Receiver/Decoder volume parameter actually sets the outgoing volume. This can be further adjusted on the receiving monitor(s). To set the volume parameter:

1. Select Next from the top-level menu.

   This displays the MAIN submenu as shown in Figure 3-18.

Figure 3-18 Main Submenu Screen

2. Select Vol from the MAIN submenu.

   This displays the Volume screen as shown in Figure 3-19. The range is from 0 to 20.

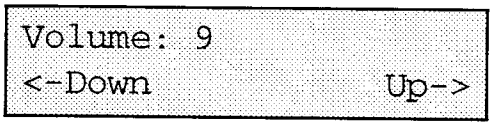

Figure 3-19 Volume Screen

3. Select Up or Down to change the volume, or use the numeric keys to change the volume and then press **Enter**.

Selecting an Audio Language

You can select any language that is embedded in the audio bitstream when in DVB mode. To do so:

1. Choose Language from the MAIN submenu as shown in Figure 3-17.

   This displays the Language menu screen as shown in Figure 3-20.

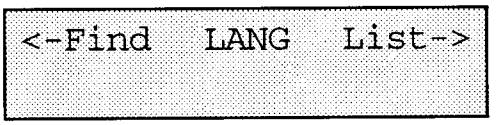

Figure 3-20 Language Menu Screen

2. Select Find or List to display available languages.

   Note Three-letter abbreviations (per ISO-639) are used to represent languages. Find displays only those languages that are embedded and available in the current audio stream. List displays 8 pre-defined languages that may or may not be embedded in the audio stream.

   This displays the Language List screen as shown in Figure 3-21.

Figure 3-21 Language Menu Scree

3. Select Prev and Next to display available languages.
4. Select Enter to change the language to that which is listed in the Language List screen. If this Language is embedded in the audio bitstream, it is selected. This language becomes the default audio track language for all program material.

Changing Tuner Frequency

The demodulator tuner frequency is a function of the Frequency minus the LNB Offset. See ↺*Adjusting the LNB.*

When in DVB mode, changing the tuner frequency affects the home transponder only in PID mode. Changing the tuner frequency affects the program stream absolutely.

To change the tuner frequency:

1. Select Tune from the MAIN submenu.

   This displays the Tune menu as shown in Figure 3-22.

```
<-Freq  TUNE   SRate->
<-FEC          Next->
```

Figure 3-22 Tune Menu Screen

2. Select Freq from the Tune menu.

   This displays the Frequency screen as shown in Figure 3-23. Remember that the frequency displayed is not the actual frequency used by the demodulator tuner; the tuner frequency is the displayed Freq value less the LNB Freq Offset. See ↺*Adjusting the LNB.*

```
Freq (in GHZ)
Freq: 12.520
```

Figure 3-23 Frequency Menu Screen

3. Use the numeric keys to change the frequency and then press **Enter**.

Changing the FEC Ratio

To change the Forward Error Correction (FEC) ratio:

1. Select FEC from the Tune menu as shown in Figure 3-22.

This displays the FEC screen as shown in Figure 3-24.

```
        FEC    Enter->
<-Prev  1/2     Next->
```

Figure 3-24 FEC Screen

2. Select Prev or Next to display the list of available FEC rations.
3. Select Enter to establish the FEC ratio you have selected.

Changing the Symbol Rate

To change the symbol rate:

1. Select SRate from the Tune menu as shown in Figure 3-22.

   This displays the Symbol Rate screen as shown in Figure 3-25.

```
Symbol Rate (Msymb)
SRate: 27.000
```

Figure 3-25 Symbol Rate Screen

2. Use the numeric keys to change the Symbol Rate and then press **Enter**.

Adjusting the LNB

To change Low Noise Block converter (LNB) parameters:

1. Select Next from the Tune menu as shown in Figure 3-22.

   This displays the Tune submenu as shown in Figure 3-26.

```
<-LNB    TUNE    Alt->
<-Network         Next->
```

Figure 3-26 Tune Submenu Screen

2. Select LNB from the Tune submenu.

This displays the LNB menu as shown in Figure 3-27.

```
<-Volts  LNB   22kHz->
<-Offset
```

Figure 3-27 LNB Menu Screen

3. Select Volts to change the LNB voltage.

   This displays the Voltage menu as shown in Figure 3-28.

```
        Voltage   14v->
<-Off             18v->
```

Figure 3-28 Voltage Menu Screen

4. Select 14 or 18 volts, or turn Off the LNB voltage feature.
5. Select Offset from the LNB menu.

   This displays the LNB Frequency Offset menu as shown in Figure 3-29. Remember that the frequency offset displayed is not the actual frequency used by the demodulator tuner; the tuner frequency is the displayed Freq value less the LNB Freq Offset. See ➲*Changing Tuner Frequency.*

```
Freq Offset  (In GHz)
Freq: 11.250
```

Figure 3-29 LNB Frequency Offset Screen

6. Use the numeric keys to change the Frequency Offset and then press **Enter**.
7. Select 22 kHz from the LNB menu.

   This displays the 22 KhZ Carrier screen as shown in Figure 3-30.

```
          22kHz    On->
           Off     Off->
```

Figure 3-30 LNB 22 kHz Carrier Screen

8. Select On or Off. Note that you cannot turn the 22 kHz carrier on unless you have first selected 14 or 18 volts above.

Enabling an Alternate Transponder

In some broadcast environments, there is more than one home transponder. This makes it possible to enable an alternate transponder. To do so, you must follow the instructions below.

1. Select Alt from the Tune submenu as shown in Figure 3-26.

   This displays the Enable Alternate Transponder screen as shown in Figure 3-31.

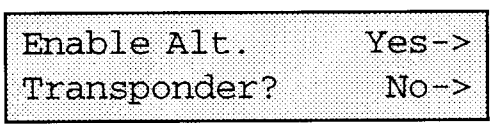

Figure 3-31 Enable Alternate Transponder Screen

2. Select Yes to enable the alternative transponder. Otherwise, to disable the alternate home transponder, select No.

   Note When you choose to enable an alternate home transponder, the SR-3200 Receiver/Decoder automatically takes you to the top of the Tune menu to set up the alternate transponder. In place of Tune the LCD displays Alt. See ➲*Changing Tuner Frequency.*

Using Network and Transport Stream IDs

In DVB mode you can select program material within a bitstream by designating a filter that identifies the transport stream and network IDs:

1. Select Network from the Tune submenu as shown in Figure 3-26.

This displays the Network IDs screen as shown in Figure 3-32.

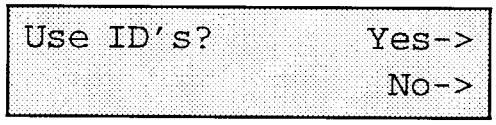

Figure 3-32 Network IDs Screen

2. Select Yes.

   This displays the Transport Stream ID screen as shown in Figure 3-33.

Figure 3-33 Transponder ID Screen

3. Use the numeric keys to change the Network ID and then press **Enter**.

   This displays the Network ID screen as shown in Figure 3-34.

Figure 3-34 Network ID Screen

4. Use the numeric keys to change the Network ID and then press **Enter**.

   The Prog screen now shows the appended filter information. For example, Program 105/1/10 indicates program 105 on transponder 1 with a Network ID of 10.

Selecting the Video Standard

To change the video standard between PAL or NTSC:

1. Select Next from the Main menu until the SR-3200 Decoder displays the Main submenu shown in Figure 3-35.

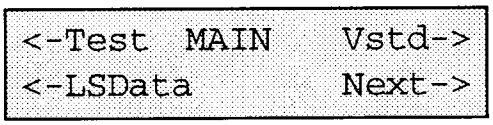

Figure 3-35 Main Submenu Screen

2. Select Vstd from the Main submenu.

   This displays the Video Standard menu as shown in Figure 3-36.

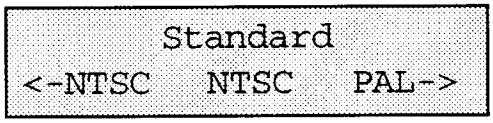

Figure 3-36 Video Standard Screen

3. Select NTSC or PAL.

About the Color Bar Test

You can use the color bar test to send a test signal to subscribers. The Denc is the source of the color pattern.

To run the color bar test:

1. Select Next from the Main menu until the SR-3200 Decoder displays the Main submenu shown in Figure 3-37.

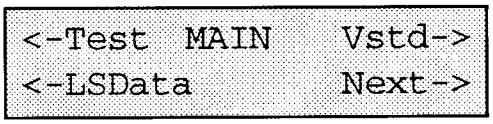

Figure 3-37 Main Submenu Screen

2. Select Test from the Main submenu.

This runs the Color Bar Test and displays the screen shown in Figure 3-38.

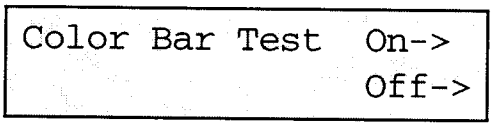

Figure 3-38 Color Bar Test Screen

3. Select `On` to switch the test on, and `Off` to shut off the test.

Selecting Low Speed Data Port Mode

To use the SR-3200 Receiver/Decoder in low speed data port mode:

1. Select `Next` from the `Main` menu until the SR-3200 Receiver/Decoder displays the `Main` submenu shown in Figure 3-39.

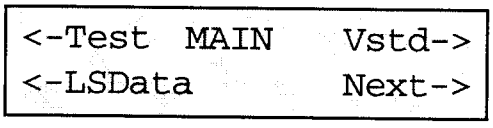

Figure 3-39 Main Submenu Screen

2. Select `LSData` from the `Main` submenu.

   This displays the `Uart Menu` screen shown in Figure 3-40.

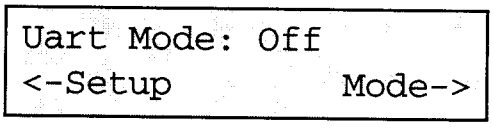

Figure 3-40 Uart Menu Screen

3. Select `Mode` from the `Uart Menu` menu.

   This will toggle between `Pass Thru` and `Off`.

4. Choose Setup from the `Uart Menu` menu.

This displays the Uart Setup menu as shown in Figure 3-41.

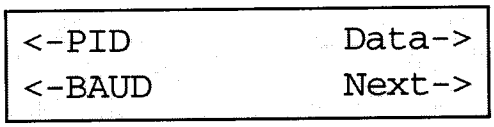

Figure 3-41 Uart Setup Menu Screen

5. Choose PID from the Uart Setup menu.

   This displays the PID screen as shown in Figure 3-42.

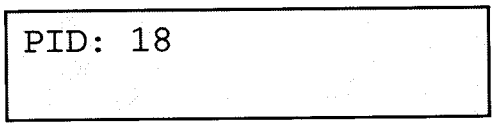

Figure 3-42 Uart PID Screen

6. Use the numeric keys to change the Uart PID and then press **Enter**. PID values can range from 0 through 8,191.
7. Choose Baud from the Uart Setup menu.

   This displays the Baud screen as shown in Figure 3-43.

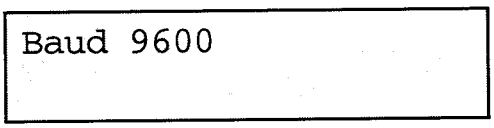

Figure 3-43 Uart Baud Screen

8. Use the numeric keys to change the Baud rate and then press **Enter**.
9. Choose Data from the Uart Setup menu.

   This displays the Uart Data screen as shown in Figure 3-44.

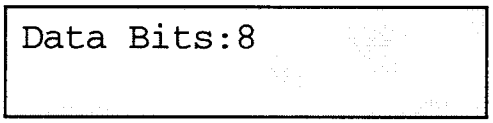

Figure 3-44 Uart Data Screen

10. Use the numeric keys to change the number of data bits (7 or 8 are the only valid values) and then press **Enter**.
11. Choose Next from the `Uart Setup` menu.

    This displays the `Uart Setup` submenu as shown in Figure 3-45.

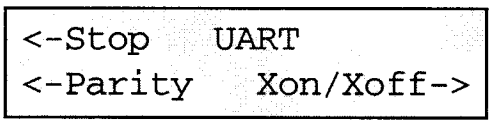

Figure 3-45 Uart Setup Submenu Screen

12. Choose `Parity` from the `Uart Setup` submenu.

    This displays the `Uart Parity` Screen as shown in Figure 3-46.

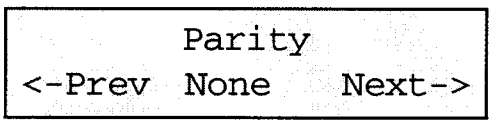

Figure 3-46 Uart Parity Screen

13. Choose `Prev` or `Next` to set parity to Even, Odd, or None.
14. Choose `Stop` from the `Uart Setup` submenu.

    This displays the `Uart Stop Bits` Screen as shown in Figure 3-47.

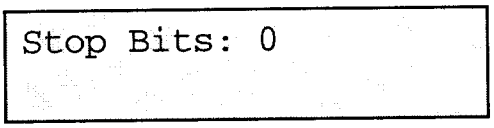

Figure 3-47 Uart Stop Bits Screen

15. Use the numeric keys to change the `Stop Bits` and then press **Enter**.
16. Choose `Xon/Xoff` from the `Uart Setup` submenu.

    This displays the `Xon/Xoff` screen as shown in Figure 3-48.

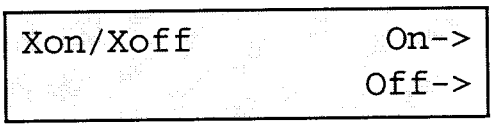

Figure 3-48 Xon/Xoff Screen

17. Select `On` to enable software handshaking protocol.

Setting IRD Configuration Parameters

To set configuration parameters:

1. Select `Next` from the `Main` menu until the SR-3200 Receiver/Decoder displays the `Main` submenu shown in Figure 3-49.

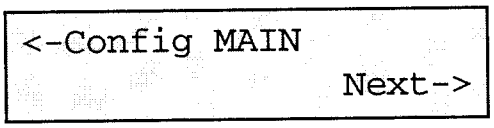

Figure 3-49 Main Submenu Screen

2. Select `Config` from the `Main` submenu.

This displays the Config menu screen as shown in Figure 3-50.

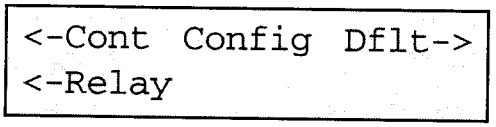

Figure 3-50 Config Menu Screen

3. Select `Cont` from the Config menu.

   This displays the Contrast screen as shown in Figure 3-51.

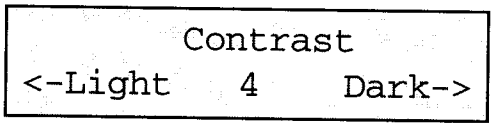

Figure 3-51 Contrast Menu Screen

4. Select `Light` or `Dark` to change the contrast.
5. Select `Relay` from the `Config` menu.

   This displays the `Alarm Relay` menu as shown in Figure 3-52. The alarm relay makes it possible to configure external alarms via the alarm port on the back panel of the SR-3200 Receiver/Decoder.

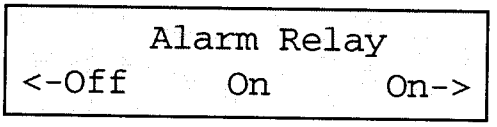

Figure 3-52 Alarm Relay Menu Screen

6. Choose `Off` to suppress alarm relay.
7. Choose `Dflt` from the `Config` menu.

   This displays the `Default Settings` screen as shown in Figure 3-53.

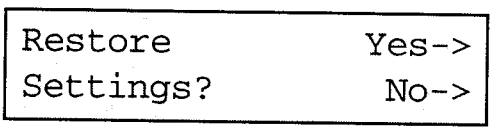

Figure 3-53 Default Settings Screen

8. Choose Yes to restore factory default settings.

Caution Restoring factory default settings can disrupt audio/video programming.

About the Boot ROM Menu

To bring up the boot ROM menu, press the red **C**(lear) key within 1 second after powering on the SR3200 Receiver/Decoder. (You can also hold down the **C**(lear) key while powering on.)

This displays the ROM menu as shown in Figure 3-54.

```
<-NetDL          Run->
<-SerDL          Ver->
```

Figure 3-54 ROM Menu Screen

The functions are as follows:

- `NetDL` performs a satellite network application code download. When a network download is in progress, the SR3200 Receiver/Decoder displays the following screen:

```
Network Download
```

- `SerDL` performs an application code download via the serial port — this requires a special PC-to-SR3200 download cable. When a serial download is in progress, the SR3200 Receiver/Decoder displays the following screen:

```
Serial Download
```

- `Run` runs the application code
- `Ver` displays the ROM version number

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