Digital Video Receiver Instructions

ALL DVR95/295/96/296 IRD's (also known as Integrated Receiver Decoders) **shipped from SCOLA** have been pre-configured and tested so if your Dish and Phase Stable LNB are in working condition and pointed to G19, 97W, Vertical Polarity, your SCOLA service will spring to life once the IRD is properly connected and plugged into power.

It is highly recommended to align your antenna and set the polarity using a spectrum analyzer or some other dish pointing device such as the "Super Buddy", "Bird Dog" or "Sat Hawk" brand meters to help identify the satellites.

If you have trouble aligning your antenna, you can call in a specialist such as:

Chris Schee, Network Services
Satellite Engineering Group, Inc.
913.324.6006 - Direct
913.324.6000 - Main
800.833.7344 - Toll Free
www.sateng.com

OR

Mike Doll at DH Satellite, 800.627.9443, dhsat@mhtc.net

Alternately, your system can be fine tuned using your WEGENER Integrated Receiver Decoder (IRD) provided you are already pointed to the GALAXY 19 satellite, 97W, Vertical polarity (odd numbered transponder) using the green and amber carrier status lights on the front panel of the WEGENER IRD. (G19 was formerly G25/IA5/T5).

NOTE: If you have a dish with a mount other than AZ/EL, it may be necessary to use an analog receiver to control the East/West movement of the dish and to fine tune your vertical polarity.

Make note of your antenna position so you can get back to this location should a problem arise and also pay close attention to the color of the carrier status light on the front of the WEGENER IRD.

1. Rotate the antenna East until the carrier status light changes color to amber and note the position. If the color changes to green note that location and continue moving the dish until the color changes back to amber and note that location.

2. Next, if necessary, reposition the antenna to your starting position and move West repeating the procedure you did for the East to find the strongest satellite signal indicated by the green status light on the front of the WEGENER IRD.

3. When you are convinced that you are in the center (where the signal is the strongest) and the carrier status light is a solid green, make a note of the position and lock down the antenna and proceed to adjusting the polarity using the same procedure.

4. It is highly recommended that you be able to skew the polarity by remote control with a polarity controller such as a “Chaparral Polor-Rotor “ **Polarity is the most critical element in digital reception.**

5. The dish point and polarity may also be tuned using the serial port of the WEGENER IRD, a DB9 serial cable, and a computer with a 9-pin serial port running a terminal emulation program such as “Windows Hyper Terminal”.

A. In this method, your terminal emulation needs to be:

ANSI at 9600 baud
No Parity
8 Data Bits
1 Stop Bit
local echo turned on.

Assuming connectivity, when you type “R”, “spacebar”, “C” and hit “Enter” on your computer, you should see the receiver's “Eb/No level (or status in the last 10 seconds)” displayed on screen.

What you are trying to accomplish is to peak your dish and polarity to the highest “Eb/No (status in the last 10 seconds) number” while fine-tuning.

B. Please pay close attention to the carrier status light on the front of the WEGENER IRD while using this method to assure you end up with a solid green light.

More details of using terminal commands is under the “Troubleshooting Hints” section below.

Troubleshooting Hints:

Please note that the IRD has only video and audio outputs -- there is no RF output, so

you cannot use a TV SET to view programming without going through a modulator or
VCR first. -- Radio Shack sells an inexpensive modulator.

DOES YOUR PICTURE FREEZE FRAME?

1. If a problem occurs when the carrier status LED on the front of the DVR95/295/96/296 IRD is a constant green, and the “data in” light blinks at the same time the picture freeze frames, this is indicative of a defective LNB or power divider (if a power divider is in use).
2. If you are experiencing the above and the carrier status LED changes from green
to amber to red you will need to re-adjust the dish point or polarity.
3. If you need technical assistance call SCOLA during normal business hours Central Time.

Programming Instructions

Connect a computer using terminal software (for example, Hyper-Terminal) to the serial port located in the rear of the DVR95/295/96/296 IRD. This connection should be made with a 9 pin serial cable (straight-through DB9 cable – a null modem cable will not work).

TERMINAL SET UP

BAUD: 9600
COMM: N,8,1
ECHO: ON
TYPE: ANSI

DIP SWITCH SETTINGS

Select the desired SCOLA channel on the WEGENER IRD by using the FREQ CMD switches (the four-position DIP switches on the rear panel of the WEGENER IRD).

For clarification see example below. The channel selection is made from left to right.
Please refer to the DVR Rear Panel Settings (graphic) for the channel assignments and their associated DIP switch settings. Tuning for available audio channels will also be listed.

The **MODE switch** is the eight-position DIP switch located on the back of the IRD. For clarification see the example below. The MODE switch must have DIP switches 2 & 8 down (All Others Up) for normal operation.

AFTER YOU GET A DIGITAL SATELLITE SIGNAL USING YOUR WEGENER IRD…

You will be able to fine tune polarity, elevation, and rotation of your antenna using a computer running “Windows HyperTerminal”, by typing “R” “Spacebar” “C” (as listed below) in conjunction with watching the carrier status light located on the front panel of the WEGENER DVR95/295/96/296 IRD.

The following example should give you an understanding of how to accomplish this.

Skew polarity while monitoring the carrier status light on the IRD...

a. Move polarity control in one direction until status light goes from green to amber; mark that position and move in the opposite direction.

b. Continue rotating skew control in the through the green light until you reach the amber light on the other side; mark that position and move back toward the center of the green carrier status light

c. When you feel you are centered (with the status light solid green), type “R_C” (that is, R(spacebar)C) and hit “Enter”; then take note of the status in last 10 seconds. Slightly rotate the skew control and again type “R_C” to observe your readings. You are trying to acquire the highest reading before drop-off.

- *** The above procedures may also be used to align East/West antenna rotation and the elevation.**

If you continue to experience color bars, lockup, or carrier status lights other than green, after verification of proper antenna Alignment, type “R_P” (R(spacebar)P), then look at alarm levels. You want to see a margin of 1.0dB and Alarm/Squelch of 5.0dB.

If not, reset by typing 'SNR_1_5”, then hit the “Enter” key (see using the SNR command (listed in item number 5 below).

IF PROBLEM STILL EXISTS

a. Your antenna may be too small (3.7m recommended), or...
b. Your LNB may be defective (recommend a Phase stability rating of +, or -, 250 Khz). To find out...
c. Please contact your local satellite dealer or one of the specialists listed at the beginning of this document to have them checked or replaced

FROM THE TERMINAL or PC KEYBOARD...

1. "Type the command for a desired result and hit the “Enter” key

2. The symbol "_" means space bar… example: “R_P” means, (R spacebar P) -- then hit the “enter” key

   Some useful commands with a terminal are listed below and in your operations / owners manual.

Useful Commands

R_C -- helps tune by the numbers obtaining the highest Eb/No in the Last 10 Seconds

SNR_1_5 -- changes squelch level of Receiver from factory defaults

R_NC -- reveals network control status and Unit address number

R_P -- factory parameter settings (to change type: “R_P” “Enter”, then type “SETTIME_1_30”, and hit “Enter” (see below)

Fade Time 00:00:30 SETTIME_1_30

* * this command changes the fade time to 30 seconds

Install Time 00:05:00 SETTIME_2_300

* * this command changes install time to 5 minutes

Carrier Search Time 48:00:00 SETTIME_3_172800

* * this command changes carrier search time to 48 hours

ANCS Timeout 01:30:00 SETTIME_4_5400

* * this command changes timeout to 1 hr, 30 minutes

ANCS Seek Time 00:00:20 SETTIME_5_20

* * this command changes ANCS seek time to 20 seconds

ANCS Search Time 48:00:00 SETTIME_6_172800

* * this command changes ANCS search time to 48 hours

Using the PERMCH Command to dynamically change channels on the WEGENER DVR series IRD. **NOTE:** all four FREQ CMD dip switches must be in the up position.

PERMCH (spacebar) 8 & Enter – dynamically selects SCOLA Channel One
PERMCH (spacebar) 12 & Enter – dynamically selects SCOLA Channel Two
PERMCH (spacebar) 14 & Enter – dynamically selects The Confucius Institute Channel (SCOLA Channel Three)
PERMCH (spacebar) 15 & Enter – dynamically selects SCOLA Channel Four
PERMCH (spacebar) 7 & Enter – dynamically selects SCOLA Channel Five
PERMCH (spacebar) 3 & Enter – dynamically selects SCOLA Channel Six
PERMCH (spacebar) 1 & Enter – dynamically selects SCOLA Channel Seven
PERMCH (spacebar) 5 & Enter – dynamically selects SCOLA Channel Eight

If you feel you have tried everything and you are not seeing SCOLA programming, call SCOLA at 712-566-2202 and ask for your SCOLA representative to direct your call to the correct person in technical support.

THANK YOU!