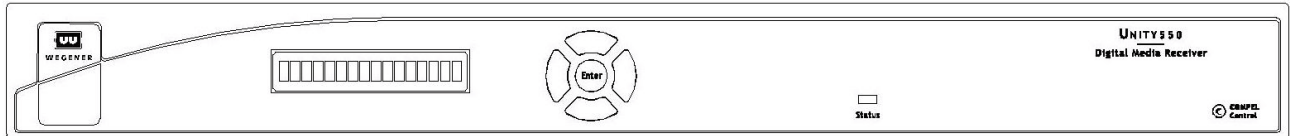# Unity 550

Enterprise Media Receiver
Installation Quick Start Guide

WEGENER®

General Information

The Wegener **Unity 550** is a digital satellite receiver that will receive signals from both **C** and **Ku** band satellite systems. Additional information may be found on the Wegener web site at: www.wegener.com.

Unpacking and Inspection

The box containing the unit should include:

- the **Unity 550** Media Receiver
- this Quick Start Guide
- the Li Shin International Enterprise Corp. inline power supply / Model: 0218B1260

- a UL Safety Sheet
- a power cord

Carefully unpack the unit and the ac power cord and inspect for obvious signs of physical damage that might have occurred during shipment. Any damage claims must be reported to the carrier immediately. Be sure to check the package contents carefully for important documents and materials.

NOTE: Save the original packing materials and shipping containers in case the unit must be returned for repair. Packing the unit in another container in such a way that the unit is damaged will void the warranty.

Environmental Operating Conditions and Physical Specifications

The table below lists the **Unity 550** Environmental Limits and Physical Specifications

Item/Limit	Specification
Use	Indoor
Altitude	Up to 2000 meters
Temperature Range	$10\,^{\circ}$ C to $40\,^{\circ}$ C
Relative Humidity (max.)	80% for temperatures up to 31° C decreasing linearly to 50% relative humidity at 40° C
Weight	6.8 pounds or 3.0844 kilograms
Dimensions (H x W x D)	1.75"x 16.5"x 11" or 44.45 mm x 419.1 mm x 279.4 mm
Input Power Rating for Unity 550	12VDC 5.0A
Input Power Rating for inline power supply	100-240VAC, 50/60Hz, 1.5A

Location and Mounting

The **Unity 550** is sized at 1RU, and may be mounted in a standard 19-inch equipment rack or set up for desktop operation. In either location, maintain a clean, dry environment for the **Unity 550**.

Rack Mounting

The **Unity 550** unit should be installed in such a way that a half-inch clearance is allowed on each side and a quarter-inch on the top to ensure adequate air flow. Ensure that a hazardous condition is not produced by uneven loading, or by resting any unsupported equipment on a rack-mounted **Unity 550** unit.

Parts for the **Unity 550** unit include 2 angle rack mount brackets and 4 rubber feet. For rack mounting, do **not** attach the rubber feet as they interfere with the rack mounting.

1. Remove the 2 screws from the left and right sides of the unit.
2. Insert the angle brackets into the left and right sides of the unit ensuring that the screw holes for the unit and brackets are aligned.
3. Secure the brackets by re-inserting the screws through the brackets and unit.
4. Install the unit onto the rack.

NOTE: The front brackets must be secured to the rack. If the front brackets are left unsecured, the unit may shift forward and fall from the rack, and may result in personal injury and/or damage to the equipment. The internal temperature of the rack should not exceed 40 º C.

Desktop Installation

Parts for the **Unity 550** unit include 2 angle rack mount brackets and 4 rubber feet. For desktop installation, do **not** attach the brackets.

1. Attach the 4 rubber feet onto the indented areas at the bottom of the unit.
2. Place the unit on a flat surface where it will not be subject to spills or impacts.
3. Route cables to the unit so that they will not be hit or pulled, causing damage to the connectors or to the unit itself. Ensure a sufficient flow of cool air so that the unit's operating ambient temperature range is not exceeded.

> **WARNING: FCC-Mandated Suppression of Radio Frequency Emissions**
>
> This is a **Class A** product. In a domestic environment this product may cause radio interference for which the user may need to take mitigating action.
>
> If the Ethernet port has a cable connected to it, that cable must be properly shielded and grounded to minimize RF emissions that could interfere with nearby equipment.

Circuit Protection and Earthing

When connecting the **Unity 550** unit to the power supply, review the ratings of all equipment in the circuit to ensure that the branch circuit, as well as the power source, will not be overloaded. Also make sure that the unit is properly grounded and/or that a protected power strip is used to attach it to the power supply.

Rear Panel Connections

Figure 1 shows the rear panel connections of the **Unity 550** that are described in **Figure 1**.
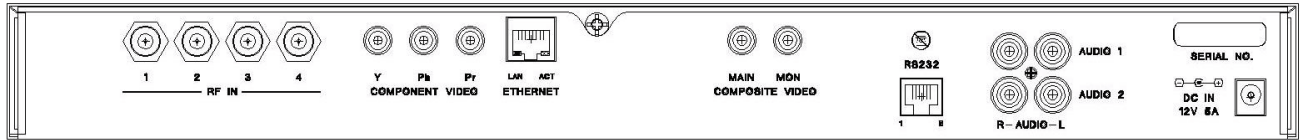
Figure 1:   Unity 550 rear panel view

Table 1: Unity 550 Interconnect Descriptions

Signal	Connector	Description
RF Switch IN - Port 1	F	950 to 2150 MHz signal accepted. LNB power available
RF Switch IN - Port 2, 3, 4	F	950 to 2150 MHz signal accepted. NO LNB power available
Main Video OUT	Phono Jack	NTSC or PAL, Composite video at 1 Vp-p
Monitor Video OUT	Phono Jack	NTSC or PAL, Composite video at 1 Vp-p
Audio OUT 1 (R & L)	Two Phono Jacks	Audio stereo
Audio OUT 2 (R & L)	Two Phono Jacks	Audio stereo
RS232 Port	RJ-12	Serial Asynchronous Data. May be used for terminal, printer, or modem (to remote terminal)

CAUTION: Do not connect RJ-12 directly to phone line. Equipment damage may result

Front Panel Connections

Figure 2 show the **Unity 550** front panel controls and describes them in **Table 2**. The IRD can be controlled via **COMPEL Network Control**, local terminal, modem (remote terminal) and **On-Screen-Display** push buttons. Normally, **COMPEL** is the primary method of controlling the IRD, while the other control methods are supplemental.

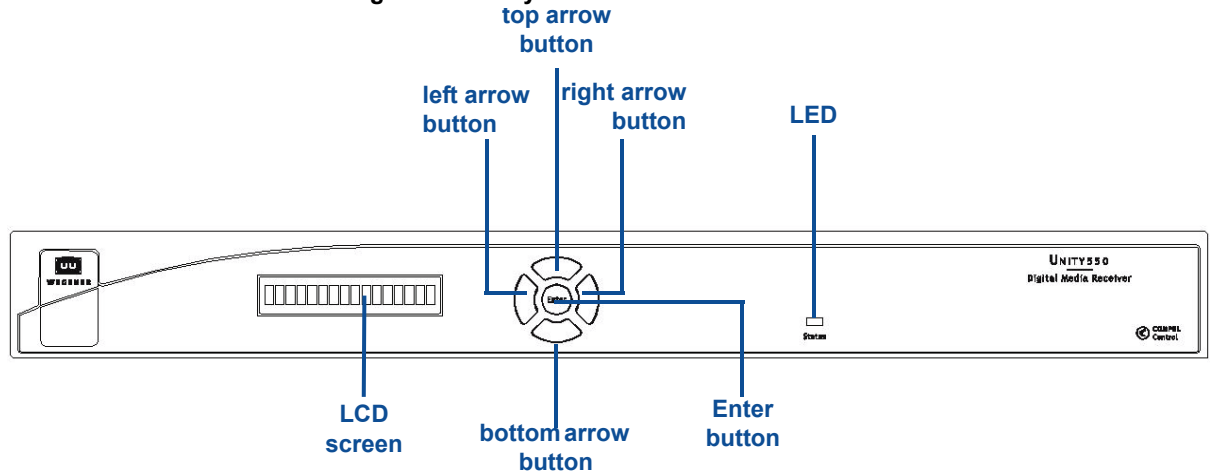**Figure 2:   Unity 550 Front Panel**

Table 2: Unity 550 Front Panel Controls

Item	Description
LCD	Activates automatically by certain status conditions, such as loss of signal. To manually activate, press the **ENTER** button.
Arrow buttons	Push buttons activates LCD and selects options displayed.
ENTER	Push button enters options selected on LCD.

LCD Menu Navigation

Operate the Unity 550 from the front panel using the arrow buttons and the LCD as shown in **Figure 2**. Menu screens on the LCD direct you to screens that control various operating functions including:

- programming
- audio

Front Panel Functions

Programming Setup

1. Use the right or left arrow buttons to navigate to **Prgm:Prog1**.
2. To edit, press **Enter**.
3. To navigate to **Prog2** or **Prog3,** use the top and bottom arrow buttons.
4. To change, press **Enter**.

Audio Setup

Use to setup **Audio 1** or **Audio 2** as indicated on the rear of the unit chassis.

1. Use the right or left arrow buttons to navigate to **Aud:A01** or **Aud:A02**
2. To edit, press **Enter**.
3. To change, press **Enter**.

Closed Captioning (CC) Setup

1. Use the right or left arrow buttons to navigate to **Sub:CC1**.
2. To edit, press **Enter**.
3. To navigate to **Sub:CC2** or **Sub:CC3** or **Sub:CC4**, use the top and bottom arrow buttons.
4. To change, press **Enter**.

LED Indications after Power-Up

Within approximately 15 seconds of power up, the IRD gives an indication of stable operation. It initializes all system components and supplies an operational status. A steady **Green** LED indicates that it is locked on a carrier and is capable of producing output (Audio/Video/Data).

If there is some problem with the IRD or the signal it is receiving the LED flashes **Red** for alarm conditions or **Amber** for warning conditions. In general, alarms indicate that the unit cannot produce output, while Warnings indicate that, although output is being produced, there is a problem that could require attention. The most common conditions that produce alarms or warnings are listed in **Table 3**.

Table 3: Unity 550 Front Panel Status LED Alarm and Warning Indications

Mode	Condition	Status LED
Alarm	Installation Mode	Red Blink = 3
	Carrier Table Search	Red Blink = 4
	Header Search Mode	Red Blink = 5
	Eb/NO Alarm	Red Blink = 7
	Not Authorized	Red Blink = 11
	Alarm Selected Program not available	Red Blink = 12
Warning	Selected Audio not available at Port 1	Amber Blink = 1
	Marginal Eb/NO	Amber Blink = 2
	COMPEL Required but No **COMPEL** in the last 2 minutes	Amber Blink = 3
	Selected Audio not available at Port 2	Amber Blink = 4
	RF Level Low	Amber Blink = 5
	RF Level High	Amber Blink = 6

OSD (On-Screen Display)

Although the **Unity 550** is set up at the factory, you can customize its settings to fit your system using the **OSD** and front-panel buttons. You may also view the existing settings and the various status and version fields by using the push buttons to navigate through the menus displayed on an attached monitor.

The **OSD** menus allow you to set up or change settings for these functions:
- Carrier Status,
- Carrier Select
- Software Version information
- Signal Strength Monitoring,
- Serial Port device selection,
- Audio Settings
- Data PID settings

OSD Setup

The **OSD** information is contained in a 14-line x 40-character display in the video output from the **Unity 550** receiver. View the **OSD** from a monitor connected to the video monitor output of the **Unity 550** receiver.
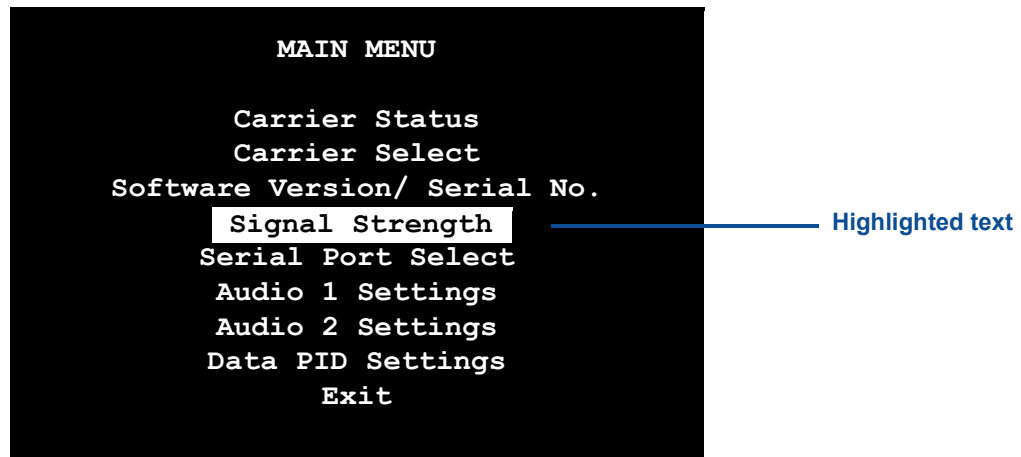
1. From the front panel, use the right or left arrow buttons to navigate to **OSD**.
2. To display the **OSD** on the monitor, press **Enter**.

NOTE: To exit the **OSD**, select **EXIT** from the Main Menu on the monitor. When a menu is first shown, the cursor is always placed on its first field.

OSD Menus

All menus are white text with a solid black background. Highlighted items display as black text on a white background. **Figure 3** is a representation of the **OSD** Main Menu.

Figure 3:   OSD Main Menu

```
              MAIN MENU

           Carrier Status
           Carrier Select
     Software Version/ Serial No.
          Signal Strength            ──────── Highlighted text
         Serial Port Select
          Audio 1 Settings
          Audio 2 Settings
          Data PID Settings
                Exit
```

Navigating OSD Menus

Use the arrow and **Enter** buttons on the **Unity 550**'s front panel to navigate and edit the fields on the **OSD** menus. **Selectable fields** allow you to change the whole parameter from pre-determined options. **Editable fields** allow you to change each digit of the parameter.

NOTE: Once a field is updated, you must select **Activate and Exit** on the submenu and then press **Enter** to update the value of the field. Before pressing **Enter**, you may go back to any field and correct it prior to acceptance.

Table 4: Unity 550 Types of **OSD** Action Fields

Button	Actions		
	Main Menu	**Submenu**	**Edit Mode**
Enter	selects submenu	goes to editable field	no action
right arrow	no action	goes to editable field	moves cursor to right
left arrow	no action	no action	moves cursor to left
up arrow	goes to previous submenu	goes to previous submenu item	increases value of highlighted item
down arrow	goes to next submenu	goes to next submenu item	decreases value of highlighted item

Warranty

The following warranty applies to all **Wegener Communications** products:

> All **Wegener Communications** products are warranted against defective materials and workmanship for a period of one year after shipment to customer. Wegener Communications' obligation under this warranty is limited to repairing or, at Wegener Communications' option, replacing parts, subassemblies, or entire assemblies. Wegener Communications shall not be liable for any special, indirect, or consequential damages. This warranty does not cover parts or equipment, which have been subject to misuse, negligence, or accident by the customer during use. All shipping costs for warranty repairs shall be prepaid by the customer. There are no other warranties, express or implied, except as stated herein.

Technical Support

In the event that the unit fails to perform as described, contact Wegener Communications Customer Service at:

- Phone: (770) 814-4057
- Fax: (678) 624-0294
- E-mail: service@wegener.com

Corporate Office:	**Service Department:**
WEGENER	**WEGENER**
11350 Technology Circle	**Customer Service**
John's Creek	359 Curie Drive
Duluth, GA 30097	Alpharetta, GA 30005