

# R4 Repeater

The R4 repeater is ideal for providing mobile signal coverage in your home. As long as there is mobile signal outside your house, this booster will amplify it and send the signal about inside your house.

For the booster to work you must have at least 2 bars of mobile signal outside your house on your phone. This repeater is powerful and will provide coverage for about 4 rooms. The touch LCD allows you to optimize the bands to achieve the best performance.

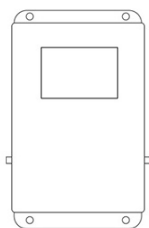


## Features:

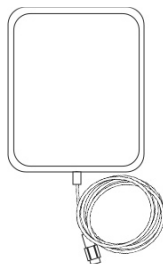
- Coverage: ~4 rooms
- Compatible with all mobile operators
- Voice and data
- Touch LCD Display.
- Everything included for complete installation
- Legal and fully compliant to the EU standards.

Product code	Frequencies	Weight	Dims	Power	Ports
SD-LCD-LGDW	800/ 900/ 1800/ 2100MHz	1.3kg	21X16X3.5cm	12V, 2A	1

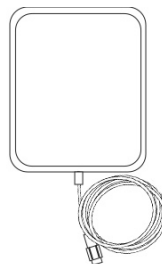
## Standard kit includes:



R4  
repeater



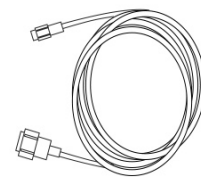
External  
antenna



Internal  
Antenna



Power  
Supply



12m External  
cable SD240

Do not use StellaDoradus repeaters with non StellaDoradus equipment.

Stelladoradus repeaters operate silently on the operators network. By using our equipment with competitors equipment you break this control system and could potentially harm the operators network. Doing so will void warranty.

## Amplifier Specs

Bands	B20	B8	B3	B1
Bands Downlink	(791-821)* + (925-960) + (1805-1880) + (2110-2170)			
Bands Uplink	(832-862)* + (880-915) + (1710-1785) + (1920-1980)			
Coverage	~4 rooms			
Gain	Uplink Gp: 55dB		Downlink Gp> 55dB	
Pass band ripple	<4dB			
I/O impedance	50 ohm/SMA female connector			
Max up/down signal strength	17dBm / 10dBm			
Ambient Temperature	-30°C to +70°C			
Power supply input	110 - 240V AC			
Power supply output	12v DC			
Oscillation Control	Automatic			
AGC Level Control:	Automatic <sup>1</sup>			
Uplink Switch On	Yes <sup>2</sup>			
AGC Range	30dB			
Surge protection	SMA connectors DC grounded, 12V DC port MOV protected			

## Antenna Specs

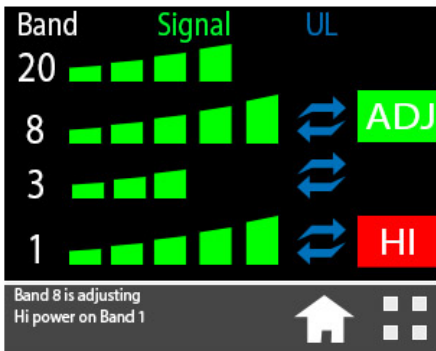
### Indoor/ Outdoor Panel

Nominal Gain	6.4dBi / 9.4dBi
3dB beam Pattern	60° x 60°
Bandwidth	700MHz - 2700MHz
VSWR	<1.4
Front to Back Ratio	> 20dB
Polarization	Vertical
Power Rating	50W
Impedance	50-OHM
Termination	SMA male
Cross Pol. Discrimination	-20dB
Dimensions	210 x 180 x 43mm
Weight	0.68kg
Wind velocity	126km/hr
Working temperature	-40°C to +65°C

<sup>1</sup>Automatically adjusts during installation. Thereafter, automatically adjusts for seasonal variation in pathloss between the base station and the outdoor antenna.

<sup>2</sup>The uplink amplifiers switch off when the repeater is not in use. This reduces the uplink noise to almost zero. When the repeater is in use (phone call or data session), the uplink amplifiers switch on for the duration of the call/ data session only.

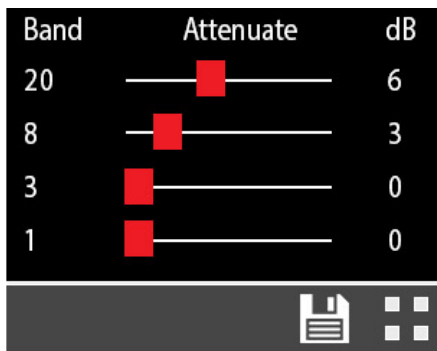
## LCD Explained



UL refers to the uplink channel. If the blue arrows are visible for a particular band, then this band is active. This means there is a voice call or data session on this band.

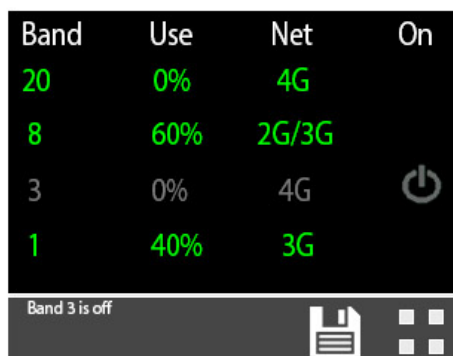
The coloured boxes with messages to the right of each band mean the following:

- ADJ - Adjusting the gain of the band to an optimal level.
- OSC - Oscillation. This means you have the indoor and outdoor antenna too close. You need to separate them more.
- HI - Hi power. This is just a warning that there is a lot of power coming in from the outdoor antenna. You do not have to do anything, so you can ignore this.
- OFF - The band is switched off, either automatically, or it has been manually shutdown.



### Settings - Attenuate

On this screen you can add attenuation to any band. For example, if the outdoor signal on band 3 is too strong and is automatically shutting down all the time, you can add some attenuation to prevent this.



### Settings - Band On/Off

On this screen you can switch off any band. For example, if band 3 is very weak, but your phone is still using it, and you are getting a poor service, then you can try switching off the band to force the call over another (more powerful) band.

Bands	20	8	3	1
Power Up (dBm)	0	-18	-16	-15
Power Dn (dBm)	0	-5	-11	-11
Temp Up (dB)	4	6	6	4
Temp Dn (dB)	2	4	4	5
Phone Up (dB)	0	0	0	0
Osc Up (dB)	0	0	0	0
Osc Dn (dB)	0	0	0	0

### Decibel page

- **Power up/dn** - This is the absolute signal power both up and down.
- Temp up/dn - These are AGC values. The higher the values here, the more powerfull the signal is.
- Phone up - This value goes high when your phone has cranked up its power to reach the base station.
- Osc up/dn - Oscillation occurs when the indoor and outdoor antenna are too close to each other. If you see tokens here, create more separation between these two antennas.