Installation and Operation Manual

PowerMax[™] 4KSBR-50U

60 dB Gain Dual Band Wireless Amplifier/Repeater System



Read Instructions before installing! If you do not understand instructions, seek professional installation.



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INSTALLATION AND OPERATION MANUAL Model #4KSBR-50U

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For answers to Frequently Asked Questions visit www.DigitalAntenna.com

Part Number	Description	
DA4000SBR	Dual Band Wireless Cellular Amplifier/Repeater	
288-PW	Outside omni-directional 9dB gain dual band cell antenna	
135-RD	Inside omni-directional dual band cell antenna with 6' cable	
DP515	Microprocessor controlled 12 VDC to 5 VDC power cable	
DP255	110-240 VAC to 5 VDC power supply	
340-50NM	50' DA340 low loss cable	
DH288	Stainless steel mounting hardware: qty 2 U-bolts, nuts, washers; qty 4	
	philips head screws	

<u>1. Package Contents</u>

2. Important Safety Information

The 4KSBR-50U system complies with all FCC, IC, UL rules, regulations and codes. Follow all guidelines in the installation and instruction manual and read completely before beginning the installation procedure. Do not deviate or disregard any of the safety features included in the manual or with the equipment, nor operate the system in an unintended manner.

WARNING!

Only Digital Antenna authorized products may be used with the 4KSBR-50U system. Using unauthorized equipment with the 4KSBR-50U system will harm the system, voids the warranty and can be detected in the event of a failure.

WARNING!

Do not install antenna near power lines. Contact with any high voltage power lines could result in shock or loss of life.

WARNING!

Handle all electronic parts with care. Dropping or mishandling the DA4000SBR amplifier/repeater, antennas or power supplies can damage sensitive RF and electronic components.

DO NOT TURN AMPLIFIER ON UNTIL ANTENNAS ARE SECURELY ATTACHED TO AMPLIFIER AND PROPERLY SEPARATED

a. LIMITED WARRANTY

Digital Antenna, Inc. warrants marine antennas for five (5) years and cellular antennas and amplifiers for one (1) year that its Products sold hereunder will at the time of shipment be free from defects in material and workmanship and will conform to Digital Antenna's applicable specifications or, if appropriate, to Customer's specifications previously accepted by Digital Antenna in writing.

If products sold hereunder are not as warranted, Digital Antenna shall, at its option repair or replace the product, provided proof of purchase and written notice of nonconformance are received by Digital Antenna within five (5) or one (1) years of date of purchase and provided said nonconforming Products are, with Digital Antenna's written authorization, returned in protected shipping containers. Customer is responsible for shipping the product to Digital Antenna. Digital Antenna will pay for transporting via ground service only the repaired product to Customer. Express service will incur a fee and must be paid by Customer prior to shipping.

This warranty shall not apply to any Products Digital Antenna determined to have been, by Customer or otherwise, subjected to mishandling, misuse, neglect, improper testing, repair alteration, damage, assembly or processing that alters physical or electrical properties.

b. LIMITATION ON LIABILITY

In no event shall Digital Antenna, Inc. Be liable for any direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Digital Antenna, Inc. Has been previously advised of the possibility of such damages, whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use, or performance of the information, services, products, and materials available from this manual. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you.

c. FCC REGULATIONS

FCC ID: PZODA4000SBR

This equipment has been tested and found to comply with the limits for a class B device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with this instruction 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 other electronic reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect to isolated power with a ground cable going directly to the battery, DC source or house ground
- Repositioning of the coaxial cable may also eliminate interference
- Consult the dealer or an experienced electronics technician for help.

Warning: Changes or modifications not expressly approved by Digital Antenna, Inc. could void the user's authority to operate the equipment.

3. Pre-Installation Guidelines

a. INSTALLATION TOOLS

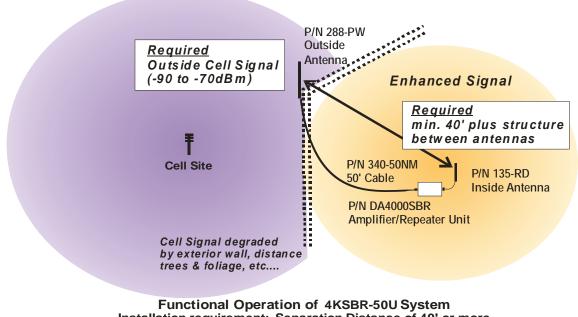
The following tools are required for installation:

- Standard wrench and philips head screwdriver
- Standard drill with ¹/₂" bit (optional)
- Cellular phone operating on 800 or 1900 MHz bands (any USA or Canadian cellular phone except Nextel)
- Wire fasteners (optional)
- Multi-meter for testing electrical continuity and AC and DC line voltage (for troubleshooting only)

b. INSTALLATION PROCEDURE

Description of 4KSBR-50U system

The 4KSBR-50U Dual Band Wireless Amplifier/Repeater system provides cellular signal coverage to interior areas that have low signal strength to adequately operate a cellular phone. In these poor interior coverage areas it becomes difficult to place or receive calls and usually results in a dropped call. The 4KSBR-50U dual band amplifier/repeater system provides increased reception indoors by filtering, re-directing and amplifying the available exterior signal. This translates into fewer dropped calls with clearer connections and stronger signals. The 4KSBR-50U dual band system operates with all carriers in the USA and Canada except Nextel/iDEN providers.



Installation requirement: Separation Distance of 40' or more plus a structure between outside and inside antennas

The 4KSBR-50U system contains a dual band low power indoor antenna, 60dB gain amplifier/repeater unit and 9dB gain omni-directional outdoor antenna. Both antennas must be installed and operate in a vertical position. The indoor antenna must be used with cable and stand. The outdoor omni-directional antenna, PN 288-PW, is installed outside

of the building. (see specific section for Home/Office, marine and RV installations) The omni-directional antenna should be installed on the side of the building with the **strongest cellular signal** as indicated by the bars on the cell phone. The **inside antenna must be** mounted in a central location in the building, RV or boat that is **40' or greater from the outside antenna with as much vertical separation as possible. Vertical separation is better than horizontal.** The inside and outside antennas also must be separated by an exterior wall and roof. Two power supplies are included to maximize installation flexibility.

Typical In-Building Coverage

The 5KSBR-50U system is designed to provide optimal coverage for up to a 3,000 SF to 5,000 SF interior area. **Interior coverage varies based upon the outside signal strength** and the interior building construction and materials. Typically the 4KSBR-50U system will penetrate 1-2 interior walls and 1 floor based upon construction material. To increase interior coverage area, use one of Digital Antenna's high gain outside and/or inside directional antennas or use a cellular combiner and multiple inside antennas. (pg 15).

Pre-installation Considerations

Establish a site installation plan based upon desired interior coverage area

- The inside and outside antenna must have a separation distance of 40 feet or greater, the outside antenna must be outside and separated from the inside antenna by an exterior wall and roof, and both antennas must be in a vertical position.
- Identify the outside antenna location. If the outdoor coverage area is very poor, the outside antenna should be placed on the side of the building where the signal is the strongest. If the signal is equally strong outdoors, the outside antenna should be placed in a secure, unobstructed area. On an RV the antenna can be attached to the back ladder. On a boat the outside antenna should be mounted clear of metal objects, 3' from other antennas and as high as possible.
- For maximum interior coverage the location of the indoor antenna should have a direct line-of-site to as much of the coverage area as possible. Never turn the repeater on without antennas and cables securely attached.
- Based upon the desired interior coverage area, choose a central location for the DA4000SBR repeater unit within 6' of a 12VDC power receptacle. If the location of the DA4000SBR unit is not mounted within reach of the supplied 50' cable, a 25' extension cable and 75' or 100' replacement cables are available (sold separately). The DA4000SBR unit is not waterproof and must be mounted in a dry location.

c. ELECTRICAL POWER

To maximize installation flexibility, the 4KSBR-50U system includes 2 power cord options.

WARNING!

Only the provided power cables are to be used with the 4KSBR-50U system. Using any other power cables will harm the DA4000SBR amplifier/repeater unit, can be detected and voids the warranty.

To plug into a standard 110 VAC receptacle use PN DP255, a 110 VAC to 5VDC Power Supply.

For use on a boat or RV, plug PN DP515, a 12 VDC to 5 VDC Power Cable, into a 12 VDC cigarette style power receptacle. The 12 VDC power supply has a micro-processor controller to turn the repeater off if not properly installed. If a red flashing light appears on the power supply, relocate the inside and outside antennas until the power supply and repeater have a constant green light. The power supply can be reset by unplugging the cigarette adapter from the power source.

d. AMPLIFIER/REPEATER STATUS

The DA4000SBR unit is designed with a status/fault indicator to indicate proper unit functionality. The chart below details the different LED color indicators.

LED	Amplifier/Repeater Status
Green solid light	Normal Status
Yellow/orange flickering light Degree of cellular transmission activity	
Solid Red light	TURN OFF, Fault needs immediate corrective
	action
No light	No power to the DA4000SBR
	amplifier/repeater or unit is damaged

If a red flashing light appears on the DP515 power supply, relocate the inside and outside antennas until the power supply has a constant green light. The power supply can be reset by unplugging the cigarette adapter from the power source.

GREEN solid light	Normal status
Flashing RED light	Power supply stops power to repeater until
	antennas are properly installed.

Green light on repeater – shows normal Status and DA4000SBR is operating normally unless coverage area is only 1-2' from inside antenna. If coverage area is only 1-2', DA4000SBR repeater has an extremely weak outside signal or is automatically powering down to prevent an oscillation. Re-locate antennas until coverage area is greater.

Green/yellow/orange flickering light on repeater - shows that cellular activity is being transmitted through the DA4000SBR unit unless cell phone is operating on 1900 MHz. The light will remain green with low levels of cellular transmission and change to flickering yellow/orange as transmission increases. The light may remain green with low levels of transmission. When a yellow/orange light is present, it must always go back to green when call is finished. If it does not go back to green, re-locate antennas until light goes back to green.

Solid Red light on Repeater – indicates a fault. Turn **OFF** power switch and proceed with the following corrective actions:

• The red light indicates that the inside and outside antennas are located too close to each other and need to be re-located. A typical installation requires that the inside and outside antennas have a minimum separation distance of 40 feet and be separated by an exterior wall and roof. If the inside and outside antennas are not 40 feet apart or more, re-locate the antennas.

• If the outside and inside antennas are separated by 40' or more and an exterior wall, the red light may be indicating the use of analog phones. Contact Digital antenna if you are using an analog phone.

No light on Repeater – indicates improper installation and the power supply is stopping power to the repeater or no power is available. Proceed with the following corrective actions:

- Only after all cables and antennas are securely attached, verify that the power switch on the DA4000SBR unit is in the ON position.
- Unplug the 12VDC power supply from the repeater and the power source. Replug the 12VDC power supply into the power source and test for 5VDC power on the output plug. 5VDC will only be available if the power supply light is green on the black box and solid red on the cigarette adapter. 5VDC will not be available at the plug if the LED on the power supply box is flashing red. The power supply must be reset by unplugging it from the power source.
- If the red light continues to flash on the power supply box after reset (unplugging from power source and plugging back in), the antennas need to be re-located until the light on the power supply box and repeater remain green. If analog service is being used, contact Digital Antenna.

e. INTERIOR COVERAGE PROBLEMS

If the DA4000SBR unit does not indicate a red light and the coverage area appears to be smaller than anticipated, one or more of the following may limit the signal strength to the area.

- **Cell Phone Bars** The bars on the cell phone do not indicate coverage area. One bar may be adequate to successfully place and receive calls. Test coverage area by successfully completing calls while disregarding bar indicator.
- **Physical obstructions degrading the cell signal** the path of the cell signal is weakened by objects. Large metal objects block or reflect the signal. Inspect the coverage area, rearrange any objects in the path of the cell signal or relocate the indoor antenna.
- **Output Power Control** The DA4000SBR has an internal output power control circuit that automatically lowers the power when the inside and outside antenna are located too close. Verify that inside and outside antennas are located at least 40' apart or more and separated by an exterior wall.
- Weak Outside Signal If the outside signal is very weak, the interior coverage area will be small. To increase coverage area, use one of Digital Antenna's high gain outside and/or inside antennas (pg 15).
- **Cabling** examine coaxial cable run and verify that the cable is not kinked, coiled or damaged. Re-locate cable to avoid kinks or coils. The serial number on the DA4000SBR unit must be available.

The repeater system only amplifies existing outside cell signal; it does NOT create a cell signal. If no outside signal is present, the repeater has no signal to amplify. The outside antenna should be mounted as high as possible to capture the available cell signal.

f. COAXIAL CABLE RECOMMENDATIONS

The 4KSBR-50U system includes 50' of Digital Antenna's **PowerMax**TM ULTRA low loss cable and connectors for easy installation. If the installed application requires more than the supplied cable, **PowerMax**TM DA340 ULTRA low loss 25' extension cable and 75' replacement cable are available. Only Digital Antenna authorized cable can be used to complete the installation. Unauthorized cable usage can be detected and voids the warranty. LMR400 cable by Times Microwave may be used for cable runs less than 150', LMR600 may be used for runs less than 200'. For cable runs greater than 200', contact Digital Antenna to verify cable selection.

4. Home/Office Installation

Review pre-installation considerations and determine site installation plan.

1. Install supplied outside antenna (PN 288-PW) to vertical surface or pole with supplied hardware. Mount the outside antenna clear of metal objects and obstructions. Outside antenna must be mounted in a vertical position. Antennas must be separated by a structure and a 40' or greater distance with as much vertical separation as possible. Vertical separation is better than horizontal.

WARNING! Only Digital Antenna authorized products may be used with the 4KSBR-50U system. Using unauthorized equipment will harm the 4KSBR-50U system, can be detected and voids the warranty.

- 2. On supplied 50' cable (PN 340-50NM) (or optional 25' extension cable or 75' or 100' replacement **PowerMax**TM cable) attach N male connector to N female connector on outside antenna. Secure cable to the side of the building with appropriate fasteners (not supplied). Route cable according to site installation plan to the DA4000SBR unit.
- **3.** Attach mini-UHF male connector at the end of the supplied 50' cable to DA4000SBR unit on the port labeled outside antenna. Attach the 6' cable attached to the inside antenna and stand to the port labeled inside antenna. The inside antenna must be operated in a vertical position. **DO NOT turn the repeater on until antennas and cables are securely attached.**
- 4. The DA4000SBR unit has four mounting holes that can be fastened to a secure surface. (fastening hardware not included)
- 5. Plug 100-240VAC power supply to the DA4000SBR unit. Plug the other end into standard household 110VAC receptacle.
- 6. Turn the power switch to ON. If the light on the DA4000SBR unit is green and the coverage area is greater than 1-2' then the 4KSBR-50U system is operating. Test the amplifier/repeater system by making a cell call and verifying that the repeater indicator light does not turn red. If the light on the DA4000SBR unit turns red immediately turn OFF the DA4000SBR unit and refer to the Amplifier/Repeater status section.

The repeater system only amplifies existing outside cell signal; it does NOT create a cell signal. If no outside signal is present, the repeater has no signal to amplify. The outside antenna should be mounted as high as possible to capture the available cell signal.

Inside Coverage area is based upon outside signal strength. A weak outside signal (-90dB) will provide less inside coverage area than a stronger outside signal (-70dB).

To increase coverage area, use one of Digital Antenna's high gain outside and/or inside directional antennas (pg 15).

5. Marine Installation

Review pre-installation considerations and determine site installation plan.

 Install supplied outside antenna (PN 288-PW) to vertical surface or pole with supplied hardware. Mount the outside antenna clear of metal objects and obstructions and as high as possible. Use PN F114 to mount 288-PW to 1"-14 threaded basse. Outside antenna must be mounted in a vertical position. The 4KSBR-50U system may also be used with one of Digital Antenna's marine 9dB gain dual band cellular antennas (pg 15). (Follow minimum 40' inside and outside antenna separation guideline) Antennas must be separated by a structure and a 40' or greater distance with as much vertical separation as possible. Vertical separation is better than horizontal.

WARNING! - Only Digital Antenna authorized products may be used with the 4KSBR-50U system. Using unauthorized equipment will harm the 4KSBR-50U system, can be detected and voids the warranty.

- 2. On supplied 50' cable (PN 340-50NM) (or optional 25' extension cable or 75' or 100' replacement **PowerMax**TM cable) attach N male connector to N female connector on outside antenna. Secure cable to the side of the building with appropriate fasteners (not supplied). Route cable according to site installation plan to the DA4000SBR unit.
- **3.** Attach mini-UHF male connector at the end of the supplied 50' cable to DA4000SBR unit on the port labeled outside antenna. Attach the 6' cable attached to the inside antenna and stand to the port labeled inside antenna. The inside antenna must be operated in a vertical position. <u>DO NOT turn the repeater on until antennas and cables are securely attached.</u>
- 4. The DA4000SBR unit has four mounting holes that can be fastened to a secure surface. (fastening hardware not included)
- When using 110VAC Plug 100-240VAC power supply to the DA4000SBR unit. Plug the other end into standard 110VAC receptacle. When using 12VDC – Plug the 12 VDC to 5 VDC power cable (PN DP515) into the DA4000SBR unit. Plug the other end into a 12VDC cigarette style power source.

The 12 VDC power supply, PN DP515, has a micro-processor controller to turn the repeater off if not properly installed. If a red flashing light appears on the power supply, relocate the inside and outside antennas until the power supply has a constant green light. The power supply can be reset by unplugging the cigarette adapter from the power source.

WARNING!

To have DC power hardwired consult a professional electronic technician.

6. Turn the power switch to ON. If the light on the DA4000SBR unit is green and the coverage area is greater than 1-2' then the 4KSBR-50U system is operating. Test the amplifier/repeater system by making a cell call and verifying that the indicator light does not turn red. If the light on the DA4000SBR unit is red immediately turn OFF the DA4000SBR unit and refer to the Amplifier/Repeater status section.

6. RV Installation

Review pre-installation considerations and determine site installation plan.

 Install supplied outside antenna (PN 288-PW) to vertical surface or pole with supplied hardware. Outside antenna must be mounted in a vertical position. Mount the outside antenna clear of metal objects and obstructions and as high as possible but take care not to exceed height of other roof mounted items such as A/C. The base of the antenna only can be attached or next to metal. The white fiberglass portion should not be next to metal. Antennas must be separated by a structure and a 40' or greater distance with as much vertical separation as possible. Vertical separation is better than horizontal.

WARNING! Only Digital Antenna authorized products may be used with the 4KSBR-50U system. Using unauthorized equipment with the 4KSBR-50U system will harm the system, can be detected and voids the warranty.

- 2. On supplied 50' cable (PN 340-50NM) (or optional 25' extension cable or 75' or 100' replacement **PowerMax**TM cable) attach N male connector to N female connector on outside antenna. Secure cable to the side of the building with appropriate fasteners (not supplied). Route cable according to site installation plan to the DA4000SBR unit.
- **3.** Attach mini-UHF male connector at the end of the supplied 50' cable to DA4000SBR unit on the port labeled outside antenna. Attach the 6' cable attached to the inside antenna and stand to the port labeled inside antenna. The inside antenna must be operated in a vertical position. <u>DO NOT turn the repeater on until antennas and cables are securely attached.</u>
- 4. The DA4000SBR unit has four mounting holes that can be fastened to a secure surface. (fastening hardware not included)
- When using 110VAC Plug 100-240VAC power supply to the DA4000SBR unit. Plug the other end into standard 110VAC receptacle. When using 12VDC – Plug the 12 VDC to 5 VDC power cable (PN DP515) into the DA4000SBR unit. Plug the other end into a 12VDC cigarette style power source.

The 12 VDC power supply, PN DP515, has a micro-processor controller to turn the repeater off if not properly installed. If a red flashing light appears on the power supply, relocate the inside and outside antennas until the power supply has a constant green light. The power supply can be reset by unplugging the cigarette adapter from the power source.

WARNING!

To have DC power hardwired consult a professional electronic technician.

6. Turn the power switch to ON. If the light on the DA4000SBR unit is green and the coverage area is greater than 1-2' then the 4KSBR-50U system is operating. Test the amplifier/repeater system by making a cell call and verifying that the indicator light does not turn red. If the light on the DA4000SBR unit is red immediately turn OFF the DA4000SBR unit and refer to the Amplifier/Repeater status section.

Amplifier/Repeater Unit PN DA4000SBR

- Frequency: Uplink: 824-849 MHz and 1850-1910 MHz Downlink: 869-895 MHz and 1930-1990 MHz
- Modulations: ALL
- Max Output Power: 3W (824-849 MHz), 2W (1850-1910 MHz)
- Dynamic Variable Gain: 64dB Max
- Impedance: 50 ohms
- Noise Figure: < 10dB
- Power Consumption: Standby 5 vdc/0.5A, Uplink 5 vdc/1.5A
- Internal Fuse: 3A
- FCC approved, FCC ID: PZODA4000SBR
- Industry Canada approved, IC ID: 4260A-DA4000SBR
- Dimensions: 4.5" l x 4.0" w x 1.25" h (114mm x 102mm x 32mm)
- Weight: 12 oz (.345 kg)
- RF Connections:

Outside Antenna Port: Mini-UHF Female

- Inside Antenna Port: Mini-UHF Female
- DC Power: Coaxial ID = 2.5mm, OD = 5.5mm (center positive)
- Indicator: Multi color status indicator
- Power Switch: Slide switch toward LED = ON

Outside Antenna PN 288-PW

- Radiation pattern: Omni-directional
- Gain: 9 dBi
- Bandwidth VSWR: < 1.5:1 = 810-950 and 1800-1980 MHz
- Max input power: 250 watts
- Dimensions: 18" l x .75" OD (45.7 cm x .2 cm)
- Weight: 8 oz.
- RF connector: N female
- Wind rating: 121.8 mph
- Installation: supplied L-bracket and hardware for wall or pole

Inside Antenna PN 135-RD

- Radiation pattern: Omni-directional
- Gain: Unity
- Bandwidth VSWR: < 1.5:1 = 810-950 and 1800-1980 MHz
- Max input power: 50 watts
- Dimensions: 3.5" 1 x .25" OD (45.7 cm x .2 cm)
- Weight: 2 oz.
- RF connector: mini-UHF male
- Installation: Freestanding swivel mount with 6' cable

Cable PN 340-50NM

- Length: 50'
- Impedance: 50 Ohm
- RF connectors: Type N male and mini-UHF male factory attached
- Attenuation at 800 MHz: 5.7dB per 100'
- Attenuation at 1900 MHz: 8.5dB per 100'

Power Supply PN DP255

- Input: 100-240VAC 50/60 Hz
- Output: 5VDC 1.5A
- Mounting: Wall type
- Cord Length: 10' (3m)
- Output plug: 5.5 x 2.5 x 11mm

Power Cable PN DP515

- Input: 9VDC to 24 VDC
- Output: 5VDC 1.5A
- Connector: Cigarette lighter style
- Internal fuse: 3A
- Cord Length: 76" (1.93m)
- Output plug: 5.5 x 2.5 x 11mm

8. Antenna & Accessory Options

For complete specifications	White	Black
Visit www.DigitalAntenna.com	PN	PN
Omni-directional Cell Antennas (Outside)		
2.5' Dual Band 9dB Gain Cellular Antenna w/ male 1"-14	854-CW	854-CB
4' Dual Band 9dB Gain Cellular Antenna w/ male 1"-14	883-CW	883-CB
8' Dual Band 9dB Gain Cellular Antenna w/ male 1"-14	897-CW	897-CB
2.5' Dual Band 9dB Gain Cellular Antenna w/ wall-pole base	996-CW	996-CB
4' Dual Band 9dB Gain Cellular Antenna w/ wall-pole base	962-CW	962-CB
8' Dual Band 9dB Gain Cellular Antenna w/ wall-pole base	967-CW	967-CB
High Gain Directional Cell Antennas (Outside)		
Multi-Band 9 dB gain Panel Antenna	426-PW	N/A
Multi-Band 10 dB gain Directional Antenna	N/A	489-DB
Low Band (800 MHz) 14 dB gain Yagi Cellular	N/A	408-YB
High Band (1900 MHz) 14 dB Yagi Cellular	N/A	419-YB
High Gain Cell Antennas (Inside)		
Multi-band Ceiling Mount Antenna	433-CM	N/A
Multi-Band 9 dB gain Directional Panel Antenna	426-PW	N/A
Cables		
25' Extension Cable (for use with 50' cable 340-50NM only)	340-25NE	
50' PowerMax TM DA340 Cable Assembly (for outside antenna)	340-50NM	
75' PowerMax TM DA340 Cable Assembly (for outside antenna)	340-75NM	
100' PowerMax TM DA340 Cable Assembly (for outside antenna)	340-100NM	
100' up to 150' DA440 Bulk Cable (for outside antenna)	DA440	
10' DA240 Cable Assembly (extends 135-RD inside antenna)	240-10FM	
20' DA340 Cable Assembly (extends 135-RD inside antenna)	340-20FM	
25' DA340 Cable Assembly (extends 135-RD inside antenna)	340-25FM	
Connectors		
Mini-UHF Male (RG174 cable)	DA274	
Mini-UHF Male (DA340 cable)	DA434	
Mini-UHF Male (DA440 cable)	DA442	
Type N Female (DA340 cable)	DA371	
Type N Female (DA440 cable)	DA390	
Type N Male (DA340 cable)	DA445	
Type N Male (DA440 cable)	DA473	
Miscellaneous		
Ferrule for mounting PN 288-PW on 1"x14 male threads	F114	
2-way Cellular Combiner w/ mini-UHF female connectors	DA-2100	

Digital Antenna manufactures cellular amplifiers, repeaters and antennas to enhance communication on land or sea. All products are designed, engineered and manufactured by Digital Antenna in the USA. Visit <u>www.DigitalAntenna.com</u> to view our complete product line.

9. Technical Support

For answers to most questions access Digital Antenna's knowledgebase and Troubleshooter section on Digital Antenna's website <u>www.DigitalAntenna.com</u>. When contacting Digital antenna regarding your repeater, locate the product's serial number on the DA4000SBR unit before calling. The serial number is located on the bottom of the DA4000SBR unit. The DA4000SBR serial number must be available to authorize technical support and/or establish a return authorization.

For installation support contact your dealer. For system warranty issues contact Digital Antenna Technical Support between the hours of 9:00 AM and 5:00 PM EST, at 954-747-7022 or e-mail <u>support@DigitalAntenna.com</u>. The 4KSBR-50U system must be used with Digital Antenna authorized equipment. The technical support team will only support Digital Antenna authorized equipment. Contact your dealer for installation questions.

For answers to *Frequently Asked Questions* visit www.DigitalAntenna.com