DA40
400MHz – 1GHz FREQUENCY RANGE
ANTENNA DISTRIBUTION SYSTEM

OWNER'S MANUAL

SAMSON
Important Safety Information

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug the apparatus during lightening storms, or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Service is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This appliance shall not be exposed to dripping or splashing water and that no object filled with liquid such as vases shall be placed on the apparatus.
17. Please keep a good ventilation environment around the entire unit.
18. The direct plug-in adapter is used as disconnect device, the disconnect device shall remain readily operable.

If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private household in the 28 member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For Countries not mentioned above, please contact your local authorities for a correct method of disposal.

By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.
**Introduction**

Congratulations on purchasing the Samson DA40 Antenna Distribution system. The DA40 allows up to four UHF wireless receivers to share the same pair of antennas. The wide band system can work with wireless systems from 470 MHz to 1 GHz. With four DC power output jacks, the DA40 facilitates more compact setups by reducing the number of cables and antennas needed. The 6dB of RF gain makes up for any insertion loss. For permanent installations or transporting in a mobile rack, the DA40 can be mounted into a single rack space using the included rackmount kit.

In these pages, you’ll find a detailed description of the features of the DA40 Antenna Distribution System, as well as step-by-step instructions for its setup and use. If your Antenna Distribution System was purchased in the United States, you’ll also find a registration card enclosed—don’t forget to follow the instructions so that you can receive online technical support and so that we can send you updated information about this and other Samson products in the future. Also, be sure to check out our website www.samsontech.com for complete information about our full product line.

We recommend you keep the following records for reference, as well as a copy of your sales receipt:

Serial number: ________________________________

Date of purchase: ________________________________

With proper care and maintenance, your DA40 Antenna Distribution System will operate trouble-free for many years. Should your Antenna Distribution System ever require servicing, a Return Authorization (RA) number must be obtained before shipping your unit to Samson. Without this number, the unit will not be accepted. Please call Samson at 1-800-3SAMSON (1-800-372-6766) for an RA number prior to shipping your unit. Please retain the original packing materials and, if possible, return the unit in its original carton. If your DA40 system was purchased outside of the United States, contact your local distributor for warranty details and service information.

**Features**

- Wide band operation from 470 MHz to 1 GHz
- Two phantom powered front-panel BNC antenna inputs
- Eight rear-panel antenna outputs which can be connected to up to four receiver inputs
- Four DC outputs for powering receivers (includes four DC barrel-to-barrel power cords).
- Rack-mountable in any standard 19" rack using the included rack mount hardware.
- All metal construction ensure reliable operation in even the most demanding performance environments.
- Includes four 20” BNC cables
Front Panel

1. **Antenna Input Connectors** - Connect a pair of tuned coaxial antennas to these BNC jacks. These antenna outputs are phantom powered, so care should be taken not to short them.

2. **POWER Switch** - Press and hold this to power the DA40 on or off.

3. **Power Indicator** - This LED lights whenever the DA40 is powered on.

Rear Panel

4. **DC Input** - Connect the supplied power adapter here, using the strain relief as shown in the illustration below. WARNING: Do not substitute any other kind of power adapter. Doing so can cause severe damage to the DA40 and will void your warranty.

5. **Antenna Output (Distributor A)** - Use these BNC jacks to connect each of these antenna outputs to the Antenna A input of the associated receiver.

6. **Antenna Output (Distributor B)** - Use these BNC jacks to connect each of the antenna outputs to the Antenna B input of the associated receiver.

7. **DC Output jacks** - Use these four 15V DC 800mA outputs to power the wireless receivers.

*Using the strain relief: Gather up a loop of wire and pass it through the strain relief, then pass the adapter plug through the loop in order to create a knot.*
Setup

1. Mount a tuned coaxial antenna to the DA40 front-panel antenna IN A input by inserting it into the BNC connector (this connector is keyed, so that you may have to rotate the antenna to fully seat it on the connector). Then twist the outer ring of the antenna clockwise until it clicks into place. Repeat the same procedure to mount the other antenna into the front-panel antenna IN B input. Note that both antenna inputs are phantom powered; take care not to short them.

2. Make connections between the rear-panel antenna outputs (A1–A4) to the Antenna A input connectors on the wireless receivers. Then make the connections between the rear-panel antenna outputs (B1–B4) to the Antenna B input connectors on the wireless receivers.

3. If you are powering the connected receivers from the DA40, use the supplied barrel-to-barrel DC cables to connect the DC Out jacks on the DA40 to the DC inputs of the receivers.

4. Connect the supplied DC adapter to the DA40 rear panel POWER IN jack and plug the adapter into a AC socket. Press and hold the front power POWER switch to turn the unit on. The power indicator will light up.

5. Turn on the power first to all connected wireless components and then to your audio system. Now we recommend you perform a walk-around test in order to make sure that coverage is provided for your entire performance area. If you do find that any new dead spots result, try changing the angle of the DA40 antennas. The basic rule of thumb for all wireless audio systems is to always try to minimize the distance between transmitter and receiver as much as possible and also to try to maintain line of sight between the two (that is, the person using the transmitter should be able to see the receiver antennas). The idea is to ensure that the strongest possible signal is received from all planned transmission points.
Remote Antennas

In fixed installations such as A/V or corporate conference rooms or for extended range applications (where the transmitters and receivers are more than 150 feet apart). Placement of remote antennas is critical, with the most important factor being the need to get them near the action. The antennas should be placed within line-of-sight of the performers, so that the performer can see the antenna. When using remote antennas, it is recommended to use 50 ohm coaxial cable that is suitable for up to 1GHz bandwidth usage (such as RG-6 cable). If you plan to run cables longer than 100’, you may need to use an in-line RF amplifier.

Rack Mounting

The DA40 receiver can be installed into a standard 19” rack for transport or permanent installation using the included rack ears.

Affix the included rack ears to each side of the DA40 receiver. Secure the rack ears in place using the screws provided.

Position the DA40 receiver into an available rack space and slide in until the rack ears are touching the rails of the rack case and are aligned with the rack rail holes.

Mount the receiver into the rack using the appropriate size rack screws (not included). To ensure equal tension and balance when installing the receiver, you should secure screws in a crisscross pattern of opposite corners: top left -> bottom right -> top right -> bottom left.

A dual receiver rack mount kit (RKDA40) is available to mount two DA40 receivers in one rack space. The kit includes two short rack ears, a center connection piece, and a rear joint plate.
## Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td><strong>Frequency Range</strong></td>
<td>470 MHz–1 GHz (-3dB)</td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td></td>
</tr>
<tr>
<td>In A - Out A</td>
<td>0±1 dB</td>
</tr>
<tr>
<td>In A – Out A1 to A4</td>
<td>0±1 dB</td>
</tr>
<tr>
<td>In B – Out B1 to B4</td>
<td>0±1 dB</td>
</tr>
<tr>
<td><strong>IP3</strong></td>
<td>50 dBm (min) / 20 dBm (typical)</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>50Ω</td>
</tr>
<tr>
<td><strong>Working Voltage</strong></td>
<td>15V DC, 2000mA</td>
</tr>
<tr>
<td><strong>Current Consumption</strong></td>
<td>200 mA</td>
</tr>
<tr>
<td><strong>Power to Antenna</strong></td>
<td>12V, 500mA</td>
</tr>
<tr>
<td><strong>Operating temperature range</strong></td>
<td>-10°C to +55°C</td>
</tr>
<tr>
<td><strong>Storage temperature range</strong></td>
<td>-20°C to +70°C</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>8.5” x 6” x 1.65”</td>
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<tr>
<td></td>
<td>215mm x 150mm x 42mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>2.2 lb / 1 kg</td>
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</table>

*At Samson, we are continually improving our products, therefore specifications and images are subject to change without notice.*