CONCERT 288M

Dual-Channel Micro UHF Wireless 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.
16. Caution-to prevent electrical shock, match wide blade plug wide slot fully insert.
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.
19. Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

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.

Samson Technologies Corp.
278-B Duffy Ave
Hicksville, NY 11801
www.samsontech.com

Important Safety Information

FCC Rules and Regulations

Samson wireless receivers are certified under FCC Rules part 15 and transmitters are certified under FCC Rules part 74. Licensing of Samson equipment is the user's responsibility and licensability depends on the user's classification, application and frequency selected.

This device complies with Part 15 of the FCC rules Class B and RSS-210 of Industry & Science Canada.

Operation is subject to the following two conditions:

(1) This device must not cause harmful interference, and

(2) This device must accept any interference received including interference that may cause undesired operation. Suitable for home or office use.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced Radio/TV technician for help.

WARNING: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment is intended for use in wireless microphone applications.

Equipment is intended for sale in: AT, BE, CH, CY, CZ*, DK, EE, FI*, FR*, DE*, GR*, HU, IE, IS, IT, LV, LT*, LU, MT*, NL, NO*, PL* PT, RO, SK, SI, ES, SE, UK

*Subject to license. Please contact your national frequency authority for information on available legal use in your area. Any changes or modifications not expressly approved by Samson Technologies Corp. could void your authority to operate the equipment.

Hereby, Samson Technologies Corp., declares that this Concert 288m is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The declaration of conformity may be consulted at:
http://www.samsontech.com/site_media/support/manuals/Concert_288m_DOC.pdf

Introduction

Congratulations on purchasing the Samson Concert 288m Dual Channel Wireless System! The Concert 288m is the ideal solution for any application which requires two wireless microphones, however it will operate with one transmitter - it all depends on your specific performance requirements.

Offering frequency-agile UHF operation, the micro-sized True RF Diversity dual receiver provides 100 available channels to secure a reliable wireless performance. The receiver provides easy setup with 1-touch scan which analyzes and selects the clearest operating channel, infrared set to pair the transmitter with the receiver, and versatile output connections (XLR, 1/4" and 1/8").

In these pages, you'll find a detailed description of the features of the Concert 288m System, as well as step-by-step instructions for its setup and use. If your wireless 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:

Receiver Serial number: _____

Transmitter Serial number: _____

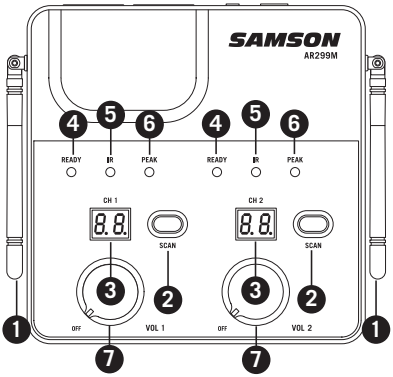
Transmitter Serial number: _____

Date of purchase: _____

If you have any questions or comments regarding the Concert 288m Microphone System or any other products from Samson, do no hesitate to contact us at **support@samsontech.com**.

With proper care and maintenance, your AirLine 99m System will operate trouble-free for many years. Should your Concert 288m 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 visit **www.samsontech.com/ra** 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 Concert 288m System was purchased outside of the United States, contact your local distributor for warranty details and service information.

AR299m Receiver Features



1. **Antennas -** The antenna mountings allow full rotation for optimum placement. In normal operation, both antennas should be placed in a vertical position. Both antennas can be folded inward for convenience when transporting the AR299m.

2. **SCAN Button -** Press this button for **more than 2 seconds** to enter scan mode, the display will flash quickly. The receiver will scan through the 100 operating channels to find the optimal channel for performance. Once the scan is complete, the AR299m will enter IR Set mode and send the selected channel to the transmitter. **NOTE -** Press and hold the button for **more than 10 seconds** to enter manual channel selection IR set mode, the display will flash slowly. This will send the receiver's current selected channel to the transmitter.

3. **LED Display -** The two digit, 7-segment LED display shows the receiver's current operating channel.

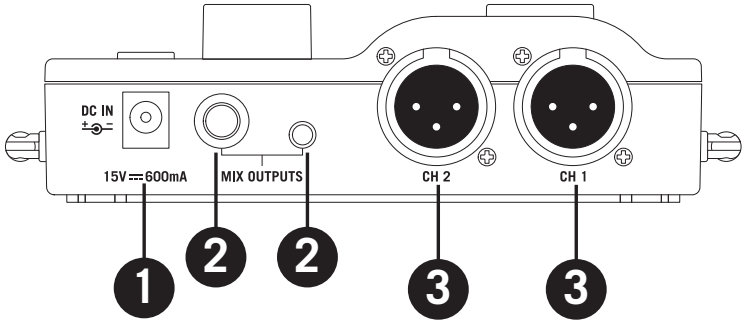
4. **READY Indicator -** This indicator lights green when the AR299m is receiving RF signal and the system is ready to use.

5. **IR Transmitter -** During "IR SET" an infrared light is used to set the transmitter channel.

6. **PEAK Indicator -** This indicator lights red when the transmitted audio signal is overloaded.

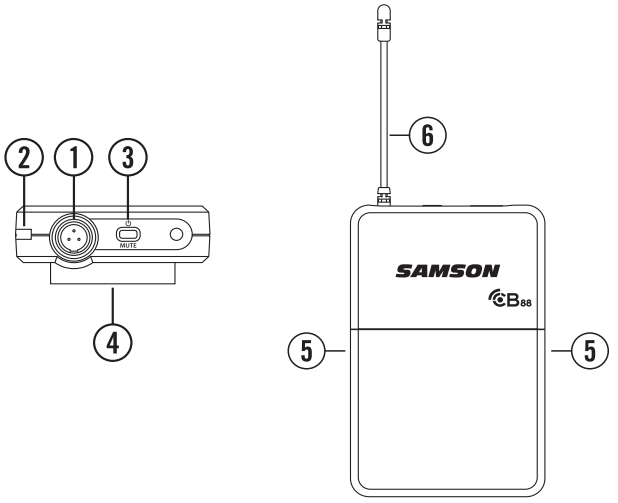
7. **VOLUME / Power Control -** This rotary knob controls the level of the receiver output and powers the AR299m on and off. Turn the control clockwise to turn the system on. Turn the knob counterclockwise until it clicks to turn the system off.

AR299m Receiver Features Rear Panel



1. **DC Input -** Connect the supplied power adapter here.
   WARNING: Do not substitute any other kind of power adapter. Doing so can cause severe damage to the AR299m and will void your warranty.
2. **MIX OUTPUTS -** Use these unbalanced 1/4" and 1/8" jacks when connecting the AR299m to consumer (-10 dBV) audio equipment. Both jacks carry a combined signal of CH1 & CH2. Wiring is as follows: tip hot, sleeve ground.
3. **CH 1 & CH 2 XLR OUTPUTS -** Use these electronically balanced low impedance (600 Ohm) XLR jacks when connecting the AR299m to professional (+4 dBu) audio equipment. Pin wiring is as follows: Pin 1 ground, Pin 2 high (hot), and Pin 3 low (cold).

Guided Tour - CB88 Belt Pack Transmitter

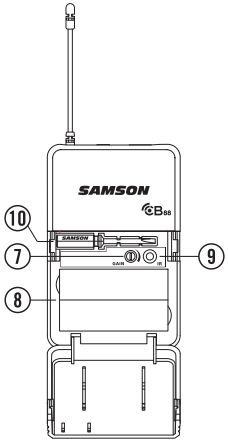


1. **Input Connector -** Connect the input device via the mini-XLR connector. The CB88 is supplied with either a lavalier or headset microphone.
2. **Status Indicator -** This LED displays the operation mode:

GREEN	Normal Operation
RED	Mute
Flashing GREEN	Low Battery

3. **Power/Mute Switch -** Press and hold to turn the unit on or off. Press and release to mute or unmute the transmitter.
4. **Belt Clip -** Use this clip to fasten the CB88 transmitter to a belt.
5. **Battery Cover Release -** Push in both sides and pull back to open the CB88 battery cover.
6. **Antenna -** This permanently attached transmitter antenna should be fully extended during normal operation.

Guided Tour - CB88 Belt Pack Transmitter



7. **Input GAIN Control** - This control adjusts the transmitter input sensitivity to better suit the lavalier or headset microphone and to control overload/distortion. For optimal performance, using the included screwdriver, set the input GAIN control to where you see the AR299m PEAK indicator start to light under high levels, then turn down slowly until the PEAK light stops lighting.

8. **Battery Holde**r - Insert two standard AA (LR6) batteries here, being sure to observe the plus and minus polarity markings shown. Although rechargeable Ni-Cad batteries can be used, they do not supply adequate current for more than four hours. WARNING: Do not insert the batteries backwards; doing so can cause severe damage to the CB88 and will void your warranty.

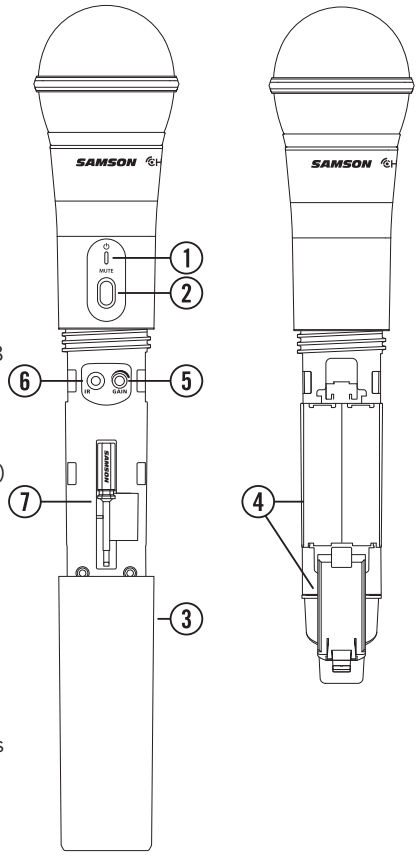
9. **IR Lens** - This window is used to capture the infrared signal sent from the AR299m receiver during the IR SET to channelize the transmitter.

10. **Screwdriver** - Designed for use in adjusting the CB88 input GAIN (#7) control.

Guided Tour - CH88 Handheld Transmitter

1. **Status Indicator** - This LED displays the operation mode:

GREEN	Normal Operation
RED	Mute
Flashing GREEN	Low Battery



2. **Power/Mute Switch -** Press and hold to turn the unit on or off. Press and release to mute or unmute the transmitter.

3. **Battery Cover -** Unscrew the battery cover and slide down to open the CH88 battery compartment.

4. **Battery Holder -** Open the battery holder by pressing the tab and lifting the cover. Insert two standard AA (LR6) batteries here, being sure to observe the plus and minus polarity markings shown. Although rechargeable Ni-Cad batteries can be used, they do not supply adequate current for more than four hours. WARNING: Do not insert the batteries backwards; doing so can cause severe damage to the CH88 and will void your warranty.

5. **Input GAIN Control -** This control adjusts the transmitter input sensitivity. For optimal performance, using the included screwdriver, set the input GAIN control to where you see the AR299m PEAK indicator start to light under high levels, then turn down until the PEAK light stops lighting.

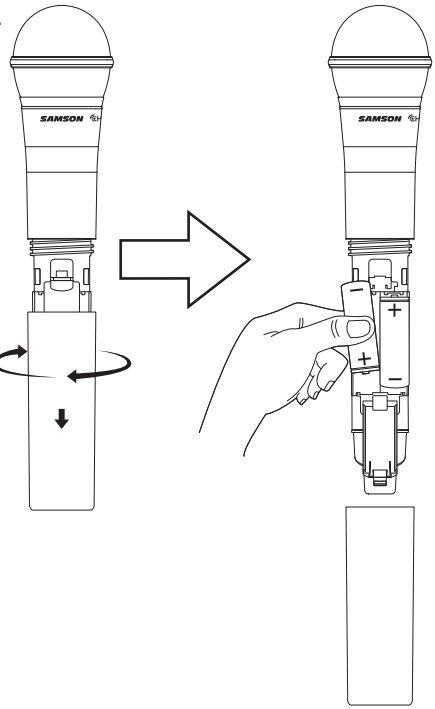
6. **IR Lens -** This window is used to capture the infrared signal sent from the AR299m receiver during the IR SET to channelize the transmitter. The battery cover must be open and the IR Lens facing towards the receiver to load the selected channel.

7. **Screwdriver -** Designed for use in adjusting the CH88 input GAIN control (See #5 Input GAIN Control HH).

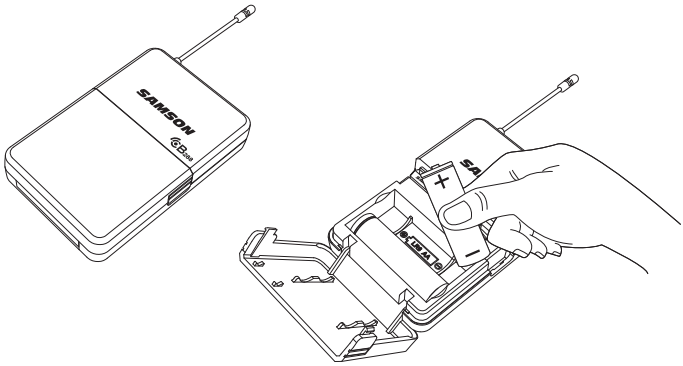
Transmitter Battery Installation

In order for your wireless system to work correctly, you'll need to install two fresh AA batteries.

1. **CH88 -** turn battery cover counter clockwise to remove the battery cover.
2. Press tab to open battery compartment door.
3. Install two AA (LR6) batteries paying close attention to polarity markings.
4. Slide battery cover back onto transmitter body and turn clockwise to close.
5. **CB88 -** press both sides of battery release to open the battery door.
6. Install two AA (LR6) batteries paying close attention to polarity markings.
7. Close the battery door.



WARNING: Do not insert the batteries backwards; doing so can cause severe damage to the CH88/CB88 and will void your warranty.



Quick Start

1. Physically place the AR299m receiver where it will be used, and extend the antennas vertically. The general rule of thumb is to maintain “line of sight” between the receiver and transmitter so that the person using or wearing the transmitter can see the receiver.
2. With the AR299m powered off, connect the included power adapter.
3. With your amplifier or mixer off and volume control all the way down, connect the AR299m receiver output jack to the mic or line level input of the mixer or amplifier using the balanced Channel 1 XLR output or (CH1/CH2 mixed) unbalanced 1/4” or 1/8” line level outputs. Turn the VOLUME 1 knob on the AR299m clockwise to turn its power on, but keep the level low.

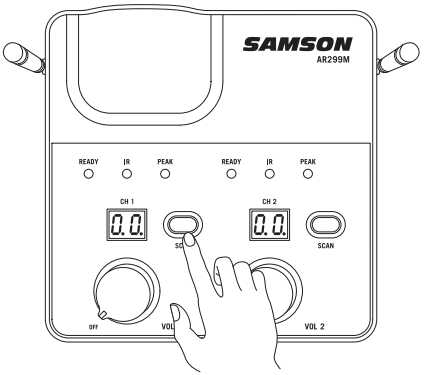


Figure 1

4. Press the CH 1 SCAN button for more than 2 seconds (the display will start to flash quickly) on the front of the AR299m receiver to scan for an available channel. Once the optimal channel is selected the receiver will enter IR Set mode. The display will flash slowly in IR Set mode. If you want to set a transmitter to the receiver’s currently selected channel, press and hold the SET button for more than 10 seconds (until the display flashes slowly) to enter IR Set mode directly. (figure 1).
5. With transmitter POWER set to “on” position the CH88 or CB88 transmitter about 6-12” (15-30 cm) from the front of the AR299m with the transmitter’s battery door open and IR window facing the IR transmitter on the front panel of the AR299m receiver (figure 2).
6. When the transmission of the operating channel is complete, the AR299m will receive RF signal and the READY indicator will light green indicating that it is receiving wireless signal from the transmitter.

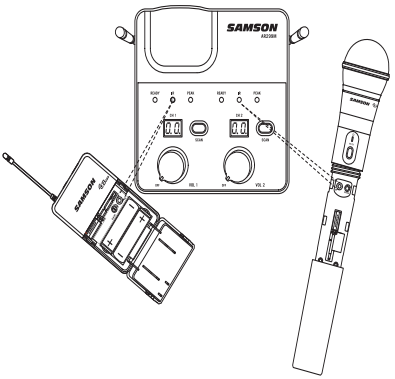


Figure 2

7. Repeat steps 4-6 to set up the other transmitter for CH 2 of AR299m. NOTE: depending on your application you can use either the balanced Channel 2 XLR output or the mixed unbalanced output (1/4” or 1/8”).

Troubleshooting

Issue	Solutions
No Audio	Make sure that the transmitter and receiver are both powered on.
	Ensure the transmitter's batteries are installed correctly.
	Check that the transmitter is not muted.
	Confirm that the AR299m adaptor is correctly connected and plugged into an electrical outlet.
	Turn on the AR299m receiver.
	Make sure the AR299m audio output connections are securely connected.
	Ensure that the receiver and transmitter are in line of sight with one another.
	Check the receiver and audio input device level controls.
	Ensure that the transmitter and receiver are set to the same operating channel. If unsure, reset the channel by performing an IR set.
Distorted Audio	The receiver output level or audio input device level may be too high.
	Check the transmitters batteries, and replace if low.
	The input gain on the transmitter (CB88/CH88) or audio source level may be too high.
Audio Dropout	The transmitter may be too far away from the receiver. Move it closer to the receiver, or reposition the antennas.
	Remove any sources that may cause RF interference such as cell phones, cordless phones, lighting equipment, computers, metal structures, etc.
Receiver will not power on	Check the adaptor to ensure it is properly connected and plugged into an outlet providing power.
Transmitter will not power on (LED lights RED)	Replace the transmitter batteries.
Unwanted noise or interference	If using multiple systems, make sure none of the systems are operating on the same channel. If the problem persists, change one or all of the systems channels.

Specifications

System

Working Range	300' (100m) line of sight
Audio Frequency Response	50 Hz - 15 kHz
T.H.D. (Overall)	<1% (@AF 1 kHz, RF 46 dBu)
Dynamic Range	>100 dB A-weighted
Signal to Noise	>95 dB
Operating Temperature	–10°C (14°F) to +60°C (+140°F)
Tone Key Frequency	35 kHz

CB88 Belt pack Transmitter

Input Connector	Mini-XLR (P3)
Input Impedance	1MΩ
Input Gain Range	38 dB
RF Power	10 mW EIRP
Power Requirements	Two AA (LR6) alkaline batteries
Battery Life	8 hours
Dimensions (HxLxD)	3.75" x 2.44" x 0.75" 96mm x 62mm x 18.5mm
Weight	0.2 lb / 93 g

CH88 Handheld Transmitter

Microphone Element	Dynamic
Input Gain Range	28 dB
RF Power	10 mW EIRP
Power Requirements	Two AA (LR6) alkaline batteries
Battery Life	8 hours
Dimensions (HxØ)	10.23" x 2.1" 260mm x 54mm
Weight	0.48 lb / 218 g

AR299m Receiver

Audio Output Level	
1/8" (3.5mm) & 1/4" (6.3mm) jack (unbalanced)	+14dBu
XLR jack (balanced)	+9dBu
Audio Output Impedance	
1/8" (3.5mm) & 1/4" (6.3.mm) jack (unbalanced)	1.1K Ohms,
XLR output jack (balanced)	240 Ohms
Sensitivity	100dBm/30dB SINAD
Image Rejection	>50dB
Operating Voltage	15VDC 600mA
Dimensions (LxWxH)	5.11" x 5.11" x 1.5" 130mm x 130mm x 39mm
Weight	0.7lb / 320g

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

Channel Plans

Group K 470–494MHz									
CH	MHz	CH	MHz	CH	MHz	CH	MHz	CH	MHz
00	470.125	20	474.625	40	479.125	60	483.625	80	488.125
01	470.350	21	474.850	41	479.350	61	483.850	81	488.350
02	470.575	22	475.075	42	479.575	62	484.075	82	488.575
03	470.800	23	475.300	43	479.800	63	484.300	83	488.800
04	471.025	24	475.525	44	480.025	64	484.525	84	489.025
05	471.250	25	475.750	45	480.250	65	484.750	85	489.250
06	471.475	26	475.975	46	480.475	66	484.975	86	489.475
07	471.700	27	476.200	47	480.700	67	485.200	87	489.700
08	471.925	28	476.425	48	480.925	68	485.425	88	489.925
09	472.150	29	476.650	49	481.150	69	485.650	89	490.150
10	472.375	30	476.875	50	481.375	70	485.875	90	490.375
11	472.600	31	477.100	51	481.600	71	486.100	91	490.600
12	472.825	32	477.325	52	481.825	72	486.325	92	490.825
13	473.050	33	477.550	53	482.050	73	486.550	93	491.050
14	473.275	34	477.775	54	482.275	74	486.775	94	491.275
15	473.500	35	478.000	55	482.500	75	487.000	95	491.500
16	473.725	36	478.225	56	482.725	76	487.225	96	491.725
17	473.950	37	478.450	57	482.950	77	487.450	97	491.950
18	474.175	38	478.675	58	483.175	78	487.675	98	492.175
19	474.400	39	478.900	59	483.400	79	487.900	99	492.400

Group D** 542–566MHz									
CH	MHz	CH	MHz	CH	MHz	CH	MHz	CH	MHz
00	542.125	20	546.625	40	551.125	60	555.625	80	560.125
01	542.350	21	546.850	41	551.350	61	555.850	81	560.350
02	542.575	22	547.075	42	551.575	62	556.075	82	560.575
03	542.800	23	547.300	43	551.800	63	556.300	83	560.800
04	543.025	24	547.525	44	552.025	64	556.525	84	561.025
05	543.250	25	547.750	45	552.250	65	556.750	85	561.250
06	543.475	26	547.975	46	552.475	66	556.975	86	561.475
07	543.700	27	548.200	47	552.700	67	557.200	87	561.700
08	543.925	28	548.425	48	552.925	68	557.425	88	561.925
09	544.150	29	548.650	49	553.150	69	557.650	89	562.150
10	544.375	30	548.875	50	553.375	70	557.875	90	562.375
11	544.600	31	549.100	51	553.600	71	558.100	91	562.600
12	544.825	32	549.325	52	553.825	72	558.325	92	562.825
13	545.050	33	549.550	53	554.050	73	558.550	93	563.050
14	545.275	34	549.775	54	554.275	74	558.775	94	563.275
15	545.500	35	550.000	55	554.500	75	559.000	95	563.500
16	545.725	36	550.225	56	554.725	76	559.225	96	563.725
17	545.950	37	550.450	57	554.950	77	559.450	97	563.950
18	546.175	38	550.675	58	555.175	78	559.675	98	564.175
19	546.400	39	550.900	59	555.400	79	559.900	99	564.400

Channel Plans

Group G* 863–865MHz									
CH	MHz	CH	MHz	CH	MHz	CH	MHz	CH	MHz
00	863.050	07	864.950	14	864.800	21	864.650	28	864.400
01	863.550	08	863.100	15	863.300	22	864.850	29	864.700
02	863.750	09	863.600	16	863.150	23	863.350	30	864.900
03	864.050	10	863.800	17	863.650	24	863.200	31	863.400
04	864.250	11	864.100	18	863.850	25	863.700		
05	864.550	12	864.300	19	864.150	26	863.900		
06	864.750	13	864.600	20	864.350	27	864.200		

Group L* 823–832MHz									
CH	MHz	CH	MHz	CH	MHz	CH	MHz	CH	MHz
00	823.125	19	826.925	38	830.100	57	824.825	76	828.825
01	824.125	20	828.125	39	831.200	58	826.025	77	829.225
02	825.325	21	828.525	40	823.625	59	827.425	78	830.600
03	826.725	22	829.900	41	824.625	60	828.625	79	831.700
04	827.925	23	831.000	42	825.825	61	829.025		
05	828.325	24	823.425	43	827.225	62	830.400		
06	829.700	25	824.425	44	828.425	63	831.500		
07	830.800	26	825.625	45	828.825	64	823.925		
08	823.225	27	827.025	46	830.200	65	824.925		
09	824.225	28	828.225	47	831.300	66	826.125		
10	825.425	29	828.625	48	823.725	67	827.525		
11	836.825	30	830.000	49	824.725	68	828.725		
12	828.025	31	831.100	50	825.925	69	829.125		
13	828.425	32	823.525	51	827.325	70	830.500		
14	829.800	33	824.525	52	828.525	71	831.600		
15	830.900	34	825.725	53	828.925	72	824.025		
16	823.325	35	827.125	54	830.300	73	825.025		
17	824.325	36	828.325	55	831.400	74	826.225		
18	825.525	37	828.725	56	823.825	75	827.625		

** Not for use in the USA and Canada.*
*** Not for use in the EU.*
For questions regarding available channels in your area contact your local Samson distributor.

Having Trouble with your Concert 288m Wireless System?
We can help!

CONTACT OUR SUPPORT TEAM: support@samsontech.com
Our experts can help you resolve any issues.

Follow us:

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