

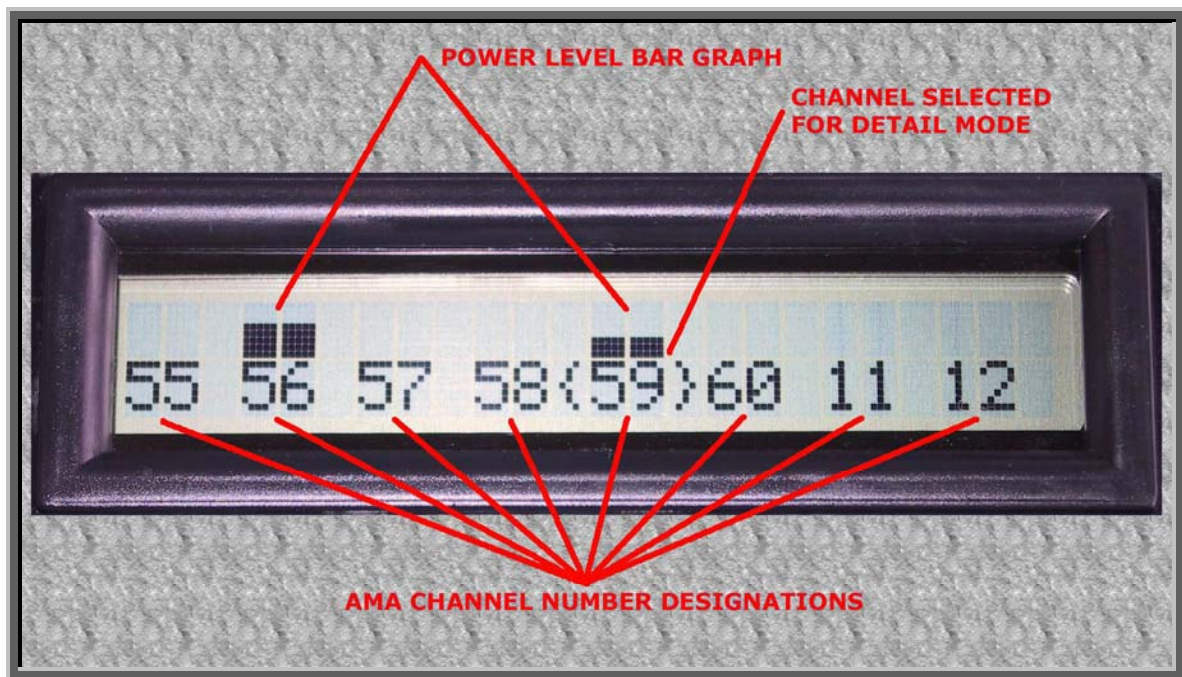


Using your
RC SCAN 7200/7500/7275

Congratulations on your purchase of an RC Scan series frequency Scanner. We are certain you will find this product easy to use as well as offer piece of mind whenever you're out enjoying your favorite hobby.

The RC Scan unit has three main modes of operation described below. Selecting between these modes is as simple as pressing the "MODE" button on the front of the unit.

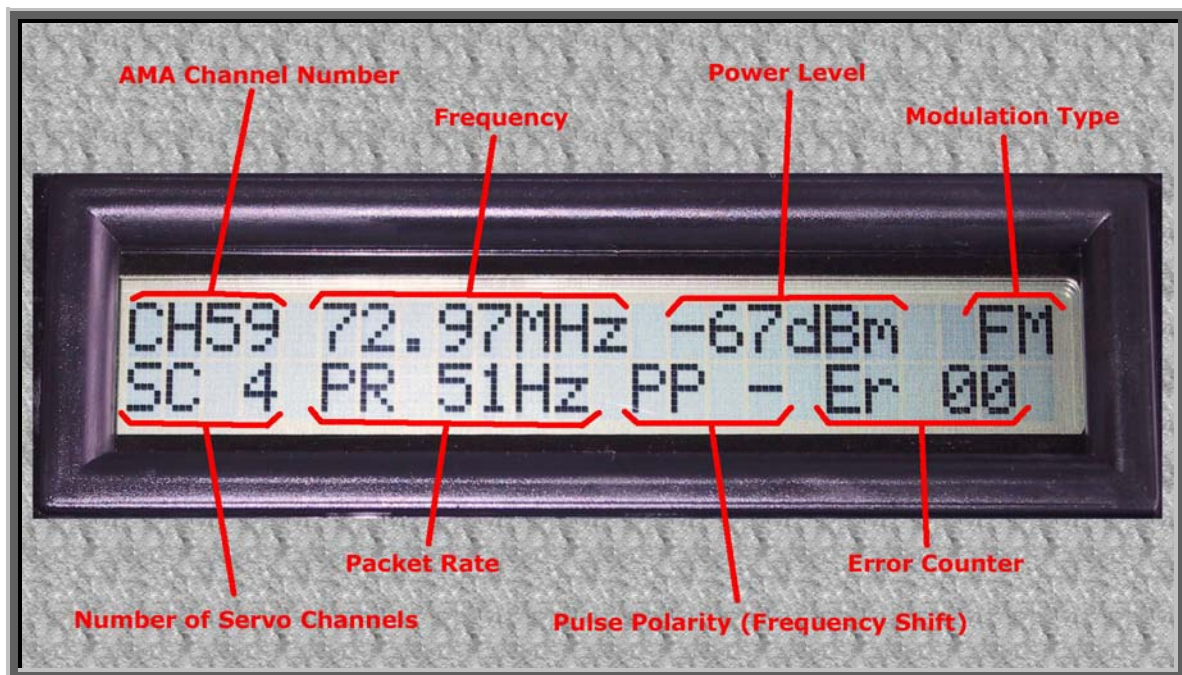
- **Spectrum Display** - In this mode the scanner uses bar graphs to show the level of RF energy on each channel. The higher the bar graph, the stronger the signal. The channels are displayed using the familiar AMA channel designations. Eight channels are displayed at once, and pressing the PAGE UP or PAGE DOWN buttons will shift the display up or down eight channels. Pressing the CHANNEL UP or CHANNEL DOWN button will shift the display up or down 1 channel. This is the most sensitive mode of the scanner and will let you see other RC transmitters up to 2000ft as well as any other source of interference that can potentially disable your receiver. By placing a channel of interest in the brackets on the center of the display and pressing the MODE switch, the scanner will enter detail mode.



- **Detail Mode** – In this mode the scanner will give you detailed information about any standard FM(PPM) RC signal source. The first line shows AMA channel number, channel frequency, signal level in dBm and modulation type (FM). The second line shows the number of servo channels supported by the transmitter (SC), the servo packet rate in hertz (PR), the pulse polarity (PP) or frequency shift + for positive shift, - for negative and finally an error counter (Er). The error counter will begin to count up whenever the RC signal is being corrupted – an indication there is RF interference present. In addition, while in this mode up to 8 servo channels are demodulated and present at the side of the case. This is useful for checking servos, transmitters or testing the control surfaces of a model before final installation of receiver and battery.

Note that the 9V battery will most likely be unable to supply enough power to run 8 servos simultaneously because of the peak current demands of a servo when it is accelerating or stalled. This can result in intermittent operation of the scanner. If this occurs, please use the DC input plug on the side of the scanner case with an external supply.

WARNING: Do not hook external power to the servo connector pins. These pins are fed from an internal regulated source. If it is desired to power the servos from an external supply the power pins must be isolated with a special harness.



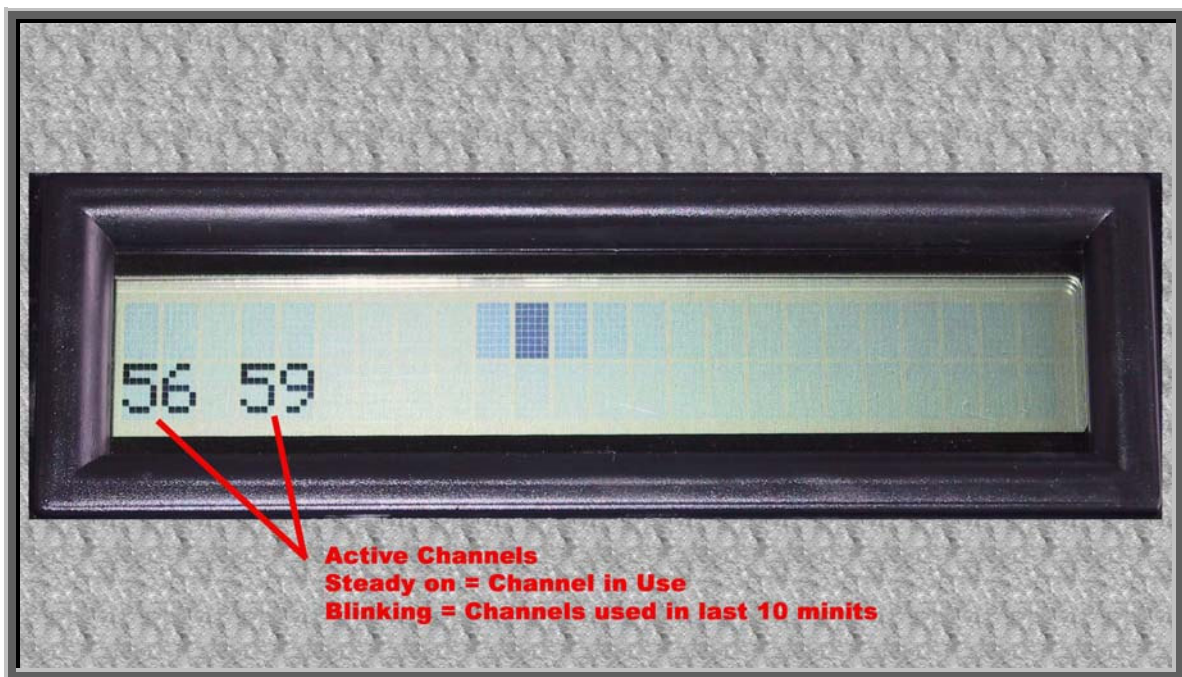
Using the Error Counter:

When in the detail mode and demodulating a standard RC FM(PPM) signal, the unit displays an error count in the lower right corner of the display. This counter indicates the number of bad frames received since being put in the detail mode. Leaving the detail mode and re-entering it will clear the counter. It is important to note that the absolute count is not what is important but rather if the counter is changing. If the counter is changing it is an indication that the signal is possibly being corrupted by a source of interference. The counter folds over back to zero after a count of 255.

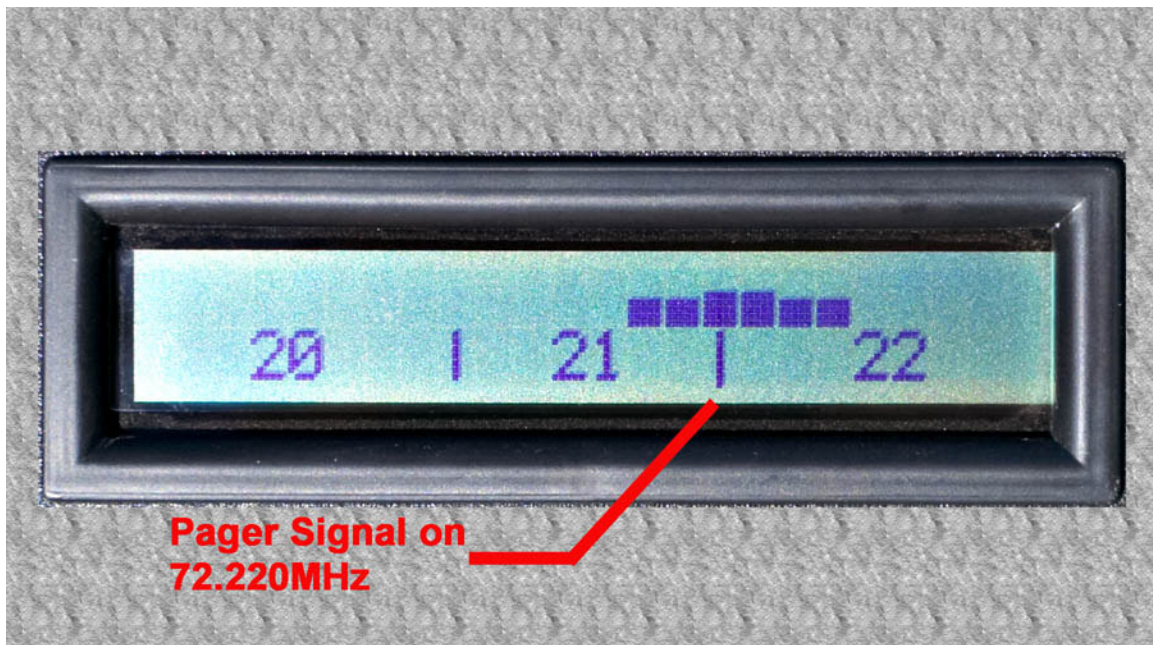
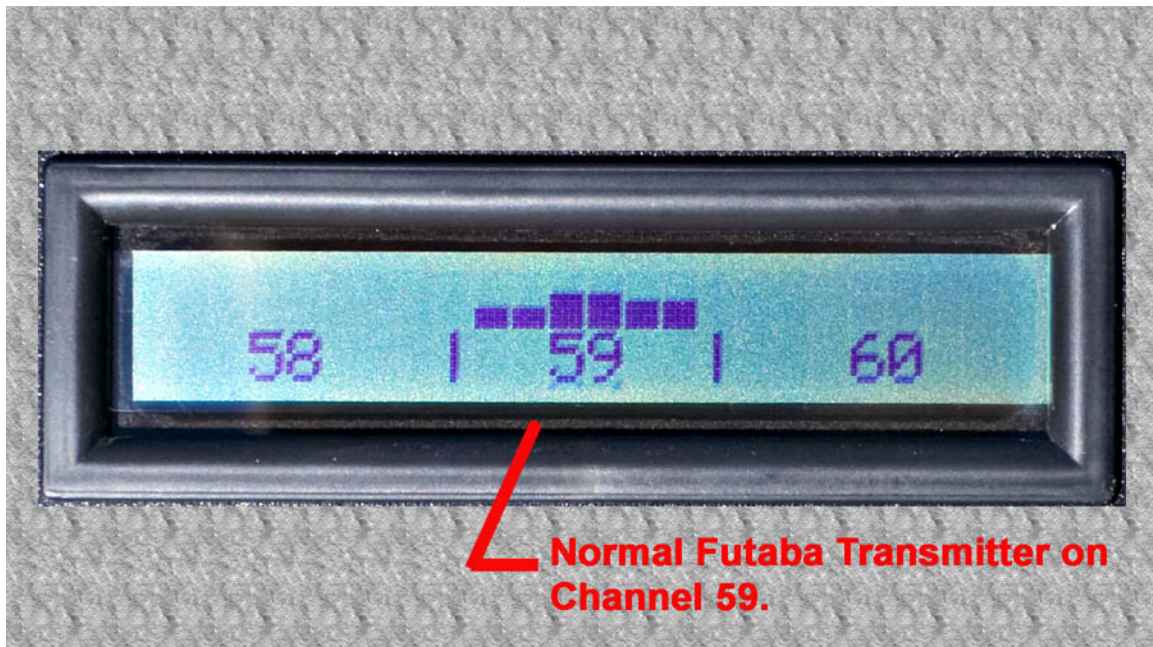
At present the RC Scan unit does not support the decoding of PCM signals in detail mode. Correct decoding will only occur when a standard FM (PPM) signal is present. The power level indication will always be valid regardless of signal type however.

- **Active Channel Mode** — In this mode, the RC SCAN unit monitors all the RC channels in a given band (11-60 for the 72 MHz band and 61-90 for the 75 MHz Band) for activity. This is the mode most likely used when going out to the field and checking to see what channels are in use. When activity is discovered, the channel number will appear on the display. If the channel number is blinking, activity was recorded within the last 10 minutes, but the channel is not currently active. This is useful when you want to monitor the spectrum, but won't be watching the display the whole time. Turn on the RC Scan unit when you get to the field, place it in Active Channel mode and go prep your plane, car or boat. When you're ready to go just take a look at the RC Scan display and see if anyone used your channel while you were getting set up.

NOTE: If you exit this mode by pressing the MODE button and re-enter it, the 10-minute memory is cleared.



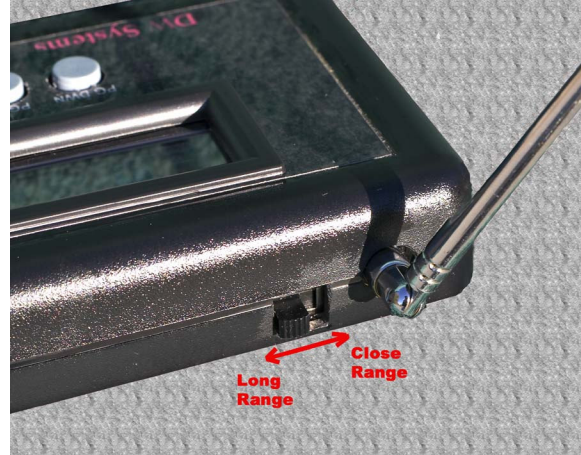
- **Spectrum Zoom Mode** – In this mode, the RC SCAN unit displays 3 adjacent channels with bar graphs to show the level of RF energy on each channel as well as in between the channels. This is useful for seeing interference that is between channels (pagers etc.) as well as seeing if a transmitter is significantly off frequency.



Additional Information:

Sensitivity Setting:

As with any receiver, excessive RF power into the RC Scan unit can cause distortion due to compression and inter-product mixing. Although this will not harm the unit, it can give false readings when in Spectrum Display mode and Active Channel mode. To help with this situation, a sensitivity switch is located at the top of the unit near the antenna. Pushing this switch away



from the antenna lets the unit operate with full sensitivity for long range scanning. Pushing the switch towards the antenna adds 20 to 30dB of attenuation to the input signal for close range scanning and helps prevent excessive RF power from getting to the highly sensitive front end. It is recommended that if the scanner is to be used close to transmitters as would occur at indoor flying events or at small outdoor parks that the unit be operated with the switch in low sensitivity mode (attenuated). The unit will still have ample sensitivity to pick up transmitters several hundred feet away. Lowering the antenna can also be used to limit input power into the scanner.

A symptom of excessive power into the scanner is power shown in adjacent channels. For example the transmitter is operating on channel 45 with the spectrum power bar graph indicating maximum power on channel 45 as well as power on channels 44 and 46.

Note that detail mode will still work even at high power levels, but the power level display will saturate at -20 to -30 dBm. This means the unit will not give accurate power level readings at levels above -30 dBm.

Selecting Frequency Bands with the RC SCAN 7275:

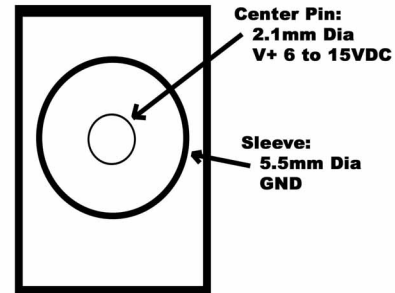
The RC Scan 7275 is capable of operating on both the 72 MHz band and the 75 MHz band. To select between these two bands simply hold down the MODE button while turning on the unit. A selection screen will appear. Simply push the CH UP or CH DOWN buttons to select the band of interest then press the MODE button to lock in your choice. The next time you power up your RC Scan unit it will automatically remember your last frequency band selection.

Power On Default Setting:

By pushing the (PG UP) and (CH DWN) buttons at the same time, the current operating mode of the unit will become the default mode at power up. Both buttons must be pushed at the same time, and if done properly the screen will display "SET".

Using External Power:

The RC Scan unit is equipped with a connector on the side of the case for supplying external power to the scanner. This connector is designed to mate with a 2.1MM female plug that has a 5.5MM outer diameter. Any voltage between 6 V and 15VDC can be used. The center pin is positive. Digi-Key stocks a compatible connector and the part number is CP-004A-ND. Connectors and Wall adaptors can also be purchased from DW Systems.



Specifications:

- Power Supply: 9V Battery
- Power Consumption: 28mA (No Servos Attached)
- Run Time: Approx. 20 Hours (No Servos Attached)
- Selectivity: 5 kHz
- Sensitivity: -98dBm
- Size: 7in x 3.5in x 1.5in (LxWxH)

Contact Information:

DW Systems

Email: brian@desert-wolfe.com

Web: <http://www.desert-wolfe.com/rcscan>

Warranty

If you are not satisfied with your RC SCAN for any reason, please return in as-new condition within 14 days of purchase for a full refund less shipping.

Parts and labor are warranted against defects in materials and workmanship for a period of 120 days from the date of the original purchase. Repair or replacement will be determined by DW Systems and will be made free of charge to the original owner. Normal wear and tear or damage caused by improper use are not covered. Cost of shipping unit to DW Systems is owner's responsibility. DW Systems will pay cost of shipping unit back to owner. Please contact DW Systems by phone or email before returning any items.