



# FREQUENCY CHECKER

## 75MHz INSTRUCTIONS



### INTRODUCTION

DuraTrax's Frequency Checker is designed to scan all thirty R/C frequencies in the 75MHz band and identify when another transmitter is operating on any such channel. **It's important to note that the Frequency Checker is NOT well suited to show very brief, intermittent Rf signals that could cause interference which may be present in the environment near or between R/C channels.**

### SPECIFICATIONS

<b>Input voltage:</b>	4.5V DC
<b>Operational current:</b>	20 - 90mA
<b>Frequency identifiers:</b>	30 individual red LEDs
<b>Scan frequency:</b>	9 seconds
<b>Max. operational temp:</b>	32-104°F (0-40°C)
<b>Dimensions:</b>	3.14"x.94"x2.36" (80x24x60mm)
<b>Weight:</b>	2.05 oz. (58g)

### SPECIAL FEATURES

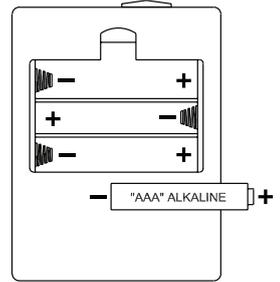
- Each frequency is identified by its own dedicated LED
- No programming or adjustments, for ease of use—automatically scans all frequencies when power is applied
- Requires 3 “AAA” alkaline cells (not included)
- Range is up to 300 feet w/o external antenna
- Range is up to 1000 feet with external antenna, available separately (DTXP3111)
- Small and lightweight, easily fits in a pocket or pit box

### IMPORTANT PRECAUTIONS

- Do not fly on a frequency that is already in use! Failure to obey this warning can and likely will result in crashed models.
- Always test your radio system before use by performing a complete range check to make sure there is a solid Rf link between the transmitter and receiver. Refer to your radio's instruction manual for further details.
- Do not allow fuel or oil to make contact with the Frequency Checker's plastic case, as it could result in damage to the case or the artwork.
- Do not store the frequency checker in extreme heat (exceeding 104°F) or cold (below -14°F), in direct sunlight, in high humidity, in high vibration environments or in dusty areas.
- Do not point a Tx antenna directly at the Frequency Checker. This will make it more difficult for the checker to detect the signal being emitted from the Tx.
- For best reception do not lay the Frequency Checker on the ground during operation. Resting the checker on an elevated surface such as a table or pit box is recommended.

### INSTALLING BATTERIES

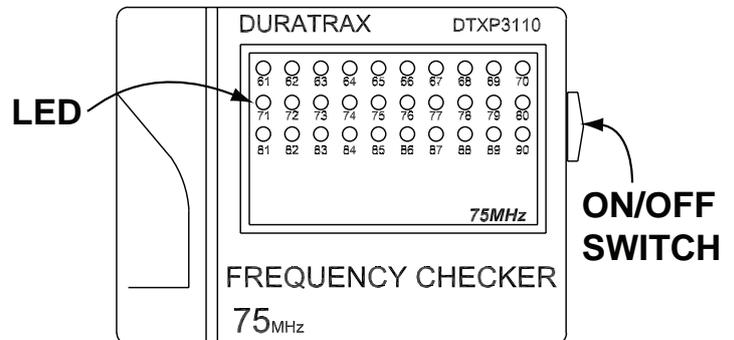
The 75MHz Frequency Checker requires 3 “AAA” sized alkaline batteries. Looking at the rear of the Frequency Checker, press the tab on the battery door, then gently remove the door. Pay close attention to insert the cells in the proper direction as shown here. Re-install the door after all batteries are installed. If the condition of the batteries is in doubt, install fresh batteries for optimum performance before use.



### OPERATION

#### ON/OFF SWITCH

The input power switch is located along the right side of the Frequency Checker. Slide the switch to the upper position to turn the unit on. Move the switch to the lower position to turn the unit off. Make sure to turn the power switch off when not in use to prevent draining the batteries.



#### LEDS

Each of the 30 channels in the 75MHz band is represented on the Frequency Checker by its own dedicated red LED. The Frequency Checker scans all frequencies in the band one-by-one. This device does NOT scan all frequencies instantaneously.

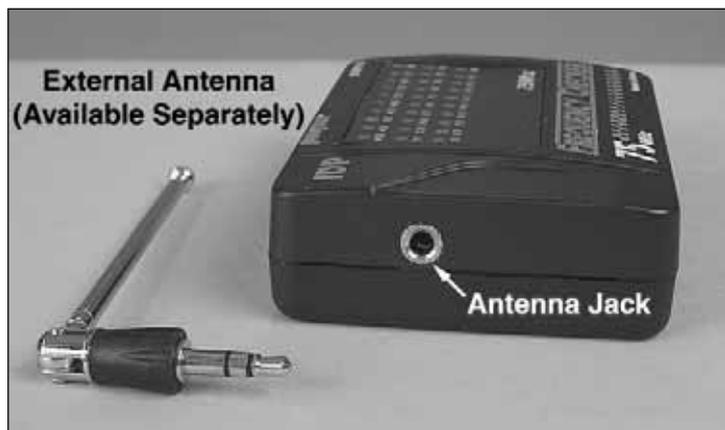
When the power switch is turned on, the Checker begins the scan starting at channel 61 (75.410MHz) as indicated by a brief flash of the LED marked “61”, then steps to channel 62 (75.430MHz), etc. until it reaches channel 90 (75.990MHz), after which time it will start over again at channel 61. It takes approximately 9 seconds for the Frequency Checker to scan through all 30 frequencies. The Checker will continue this scanning process until the power switch is turned off.

When the Frequency Checker identifies that a frequency is in use, the LED for that particular channel will stay **on**. This means it is not safe to use that respective channel! The Checker will then continue to scan the next channels in order,

and if a signal is detected on another channel its LED will stay on solid as well. For example, it is possible that all 30 LEDs could stay on if a signal is detected on all 30 channels, although such a circumstance is highly unlikely. Each LED will stay on until the Checker scans through all other remaining channels and back again, at which time the scan will start over. If during the next scan of that channel the signal disappears the LED will turn off. For reference, see the list below to match the channel number to its respective frequency in the 75MHz band:

Channel	Freq	70	75.590	81	75.810
11	72.010	71	75.610	82	75.830
61	75.410	72	75.630	83	75.850
62	75.430	73	75.650	84	75.870
63	75.450	74	75.670	85	75.890
64	75.470	75	75.690	86	75.910
65	75.490	76	75.710	87	75.930
66	75.510	77	75.730	88	75.950
67	75.530	78	75.750	89	75.970
68	75.550	79	75.770	90	75.990
69	75.570	80	75.790		

## ANTENNAS



The 75MHz Frequency Checker has a built-in antenna which is designed to receive transmitter signals from within a 300 foot radius. If a greater range is desired, an external antenna is available separately (DTXP3111). Contact your local hobby shop for details. Using the external antenna can extend the Frequency Checker's range to a radius of 1000 feet. It's best to point the antenna skyward for best reception.

When using the external antenna, extra channels might appear to be in use if the checker is physically located **very near** a Tx which is emitting a signal. Moving the checker several feet away from the Tx should clear the problem. If used inside buildings which have a lot of steel/metal in the structure, extra channels might inadvertently be shown, and NOT using the external antenna may deliver the best results in this situation.

## INDOOR RACE TRACKS

When used inside enclosed buildings, particularly those constructed with a steel structure and covered with a metallic surface, it's possible that the Frequency Checker might show some erratic behavior. Such facilities can cause excessive reflection of Rf signals, and might cause the Frequency Checker to indicate that some frequencies are being used when, in fact, they might not be. This condition will typically worsen as more transmitters are in use.

## TROUBLESHOOTING GUIDE

**PROBLEM:** Unit does not seem to function at all.

**CAUSES AND CURES:**

1. Power switch turned off. Turn power switch on.
2. Batteries may be weak or dead. Replace batteries.
3. Batteries may be installed improperly. Re-install batteries in proper configuration.
4. Internal problem. Contact Hobby Services.

**PROBLEM:** Short range.

**CAUSES AND CURES:**

1. Batteries may be weak. Replace batteries.
2. Internal antenna may be insufficient for particular area. Purchase of external antenna may be necessary.
3. External antenna not fully extended. Extend antenna.

**PROBLEM:** LEDs are faded, or certain LEDs not functioning.

**CAUSES AND CURES:**

1. Batteries may be weak. Replace batteries.
2. Internal damage. Contact Hobby Services.

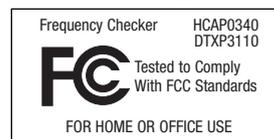
**PROBLEM:** Unit indicates more frequencies are in use than are being used by modelers in the area.

**CAUSES AND CURES:** Many channels are being used simultaneously in a "noisy" Rf environment, such as inside a metal structure. Reduce the number of racers driving at one particular time. Do not use the external antenna in such instances as it could exaggerate the effect of the noisy environment.

## FCC STATEMENT

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions.

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.



## 1-YEAR LIMITED WARRANTY

**\*U.S.A. AND CANADA ONLY**

DuraTrax warrants this product to be free from defects in materials and workmanship for a period of one (1) years from the date of purchase. During that period, DuraTrax will, at its option, repair or replace without service charge any product deemed defective due to those causes. You will be required to provide proof of purchase (invoice or receipt). This warranty does not cover damage caused by abuse, misuse, alteration or accident. If there is damage stemming from these causes within the stated warranty period, DuraTrax will, at its option, repair or replace it for a service charge not greater than 50% of its then current retail list price. Be sure to include your daytime telephone number in case we need to contact you about your repair. This warranty gives you specific rights. You may also have other rights, which vary from state to state.

For service on your DuraTrax product, warranty or non-warranty, send it post-paid and insured to:

HOBBOY SERVICES  
3002 N. Apollo Drive Suite 1  
Champaign, IL 61822  
(217) 398-0007

\*For warranty and service information if purchased outside the USA or Canada, see the additional warranty information insert (if applicable) or ask your retailer for more information.

[www.duratrax.com](http://www.duratrax.com)