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W-CDMA Cal Application (E6832A)

Downlink Channel (UARFCN)

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Supported Downlink Channels and Frequencies

The DL Channel setting specifies the downlink UTRA Absolute RF Channel Number (UARFCN). This determines at what frequency the test set's RF generator will transmit the downlink signal.

The relationship between UARFCN and downlink frequency is described in 3GPP TS 25.101 section 5.

Downlink Frequency and UARFCN, and DL Channel Range

Band	DL to UL Frequency Separation (MHz)	Center Frequency Range (MHz)	UARFCN Equation	UARFCN Range	Applicable Test Set Uplink Channel Range
I (IMT-2000)	190	2112.4 - 2167.6 increment = 0.2	5 * (center freq in MHz)	10562 - 10838	10562 - 10838
II (US PCS)	80	1932.4 - 1987.6 increment = 0.2	5 * (center freq in MHz)	9662 - 9938	9662 - 9938
		1932.5 - 1987.5 increment = 5	5 * ((center freq in MHz) - 1850.1 MHz)	412, 437, 462, 487, 512, 537, 562, 587, 612, 637, 662, 687	412, 437, 462, 487, 512, 537, 562, 587, 612, 637, 662, 687
III (DCS/PCS)	95	1807.4 - 1877.6 increment = 0.2	5 * ((center freq in MHz) - 1575 MHz)	1162 - 1513	1162 - 1513
IV	400	2112.4 - 2152.6 increment = 0.2	5 * ((center freq in MHz) - 1805 MHz)	1537 - 1738	1537 - 1738
		2112.5 - 2152.5 increment = 5	5 * ((center freq in MHz) - 1735.1 MHz)	1887, 1912, 1937, 1962, 1987, 2012, 2037, 2062, 2087	1887, 1912, 1937, 1962, 1987, 2012, 2037, 2062, 2087
V (US Cellular)	45	871.4 - 891.6 increment = 0.2	5 * (center freq in MHz)	4357 - 4458	4357 - 4458
		871.5, 872.5, 876.5, 877.5, 882.5, 887.5	5 * ((center freq in MHz) - 670.1 MHz)	1007, 1012, 1032, 1037, 1062, 1087	1007, 1012, 1032, 1037, 1062, 1087

VI (Japan 800)	45	877.4 - 882.6 increment = 0.2	5 * (center freq in MHz)	4387 - 4413	4387 - 4413
		877.5, 882.5	5 * ((center freq in MHz) - 670.1 MHz)	1037, 1062	1037, 1062
VII (UMTS 2600)	120	2622.4 - 2687.6 increment = 0.2	5 * ((center freq in MHz) - 2175 MHz)	2237 - 2563	2237 - 2563
		2622.5 - 2687.5 increment = 5	5 * ((center freq in MHz) - 2105.1 MHz)	2587, 2612, 2637, 2662, 2687, 2712, 2737, 2762, 2787, 2812, 2837, 2862, 2887, 2912	2587, 2612, 2637, 2662, 2687, 2712, 2737, 2762, 2787, 2812, 2837, 2862, 2887, 2912
VIII (UMTS 900)	45	927.4 - 957.6 increment = 0.2	5 * ((center freq in MHz) - 340 MHz)	2937 - 3088	2937 - 3088
IX (UMTS 1700)	95	1847.4 - 1877.4 increment = 0.2	5 * (center freq in MHz)	9237 - 9387	9237 - 9387
X (UMTS Extended 1.72/2.1 GHz)	400	2112.4 - 2167.6 increment = 0.2	5 * ((center freq in MHz)-1490 MHz)	3112 - 3388	3112 - 3388
		2112.5 - 2167.5 increment = 5	5 * ((center freq in MHz)-1430.1 MHz)	3412, 3437, 3462, 3487, 3512, 3537, 3562, 3587, 3612, 3637, 3662, 3687	3412, 3437, 3462, 3487, 3512, 3537, 3562, 3587, 3612, 3637, 3662, 3687
XI (UMTS 1500 MHz)	48	1478.4 - 1498.4 increment = 0.2	5 * ((center freq in MHz)-736 MHz)	3712 - 3812	3712 - 3812

How to change the DPCH DL Channel:

The **DPCH DL Channel** setting sets the test set's RF Generator to a specific uplink UARFCN value. Alternatively, you can set the downlink frequency. The **DPCH DL Channel** setting is located on the **RF Generator** tab of the **RF Control** window.

1. On the front panel, under SCREENS, press the **Main/Call** key to display the **RF Control** window.
2. Select the **RF Generator** tab.
3. Set the **Control Mode** to Auto.
4. Set **DPCH DL Channel** to the desired value.

SCPI Command: TRANsceiver:CHANnel:DOWNlink:FDD

How to set the downlink frequency:

The RF Generator's **Frequency** setting sets the downlink frequency. Alternatively, you can set the DPCH DL Channel. The downlinik **Frequency** setting is located on the **RF Generator** tab of the **RF Control** window.

1. On the front panel, under SCREENS, press the **Main/Call** key to display the **RF Control** window.
2. Select the **RF Generator** tab.

3. Set the **Control Mode** to Manual.
4. Set **Frequency** to the desired value.

SCPI Command: RFGenerator:FREQuency:WCALibration

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