



RF TEST REPORT

Applicant Hot Pepper, Inc.
FCC ID 2APD4-A81C
Product 4G Smart Phone
Model HPP-GS1
Report No. R1903A0130-R2V2
Issue Date July 4, 2019

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 / FCC CFR 47 Part 90S**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Performed by: Peng Tao

Approved by: Kai Xu

TA Technology (Shanghai) Co., Ltd.

No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000



TABLE OF CONTENT

1. Test Laboratory	4
1.1. Notes of the Test Report	4
1.2. Test facility	4
1.3. Testing Location	5
2. General Description of Equipment under Test	6
3. Applied Standards	7
4. Test Configuration	8
5. Test Case Results	9
5.1. RF Power Output	9
5.2. Effective Radiated Power	11
5.3. Occupied Bandwidth	14
5.4. Emission Mask	16
5.5. Peak-to-Average Power Ratio (PAPR)	18
5.6. Frequency Stability	20
5.7. Spurious Emissions at Antenna Terminals	23
5.8. Radiates Spurious Emission	25
6. Main Test Instruments	30
ANNEX A: EUT Appearance and Test Setup	31

Summary of measurement results

No.	Test Type	Clause in FCC rules	Verdict
1	RF power output	2.1046/90.635(b)	PASS
2	Effective Radiated Power	90.635(b)	PASS
3	Occupied Bandwidth	2.1049/ 90.209	PASS
4	Emission Masks	2.1051 / 90.691	PASS
5	Peak-to-Average Power Ratio	KDB 971168 D01(5.7)	PASS
6	Frequency Stability	2.1055 / 90.213	PASS
7	Spurious Emissions at Antenna Terminals	2.1051 / 90.691	PASS
8	Radiates Spurious Emission	2.1053 /90.691	PASS
Date of Testing: March 29, 2019~ April 18, 2019			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard.			



1. Test Laboratory

1.1. Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

CNAS (accreditation number:L2264)

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS).

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

IC (recognition number is 8510A)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement.

VCCI (recognition number is C-4595, T-2154, R-4113, G-10766)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Japan to perform electromagnetic emission measurement.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.



1.3. Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Xu Kai
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: xukai@ta-shanghai.com

2. General Description of Equipment under Test

Client Information

Applicant	Hot Pepper, Inc.
Applicant address	5151 California Ave., Suite 100, Irvine 92617, USA
Manufacturer	Hot Pepper, Inc.
Manufacturer address	5151 California Ave., Suite 100, Irvine 92617, USA

General Information

EUT Description		
Model	HPP-GS1	
IMEI	IMEI 1:355490100001472 IMEI 2:355490100001480	
Hardware Version	A81C_MAINBOARD_P1	
Software Version	HPP-GS1-V1.0.4-190121	
Power Supply	Battery/AC adapter	
Antenna Type	Internal Antenna	
Antenna Gain	-3.0dBi	
Test Mode(s)	CDMA BC10;	
Test Modulation	QPSK;	
Maximum E.R.P.	CDMA BC10:	17.92dBm
Rated Power Supply Voltage	3.8V	
Extreme Voltage	Minimum: 3.5V Maximum: 4.4V	
Extreme Temperature	Lowest: -15°C Highest: +55°C	
Operating Frequency Range(s)	Band	Tx (MHz)
	CDMA BC10	817 ~ 824
EUT Accessory		
Adapter	Manufacturer: Shenzhen Tianyin Electronics Co.,Ltd Model: TPA-23A050200UU01	
Battery 1	Manufacturer: Shenzhen HUATIAN TONG TECHNOLOGY CO.LTD Model: H2019GS1	
Battery 2	Manufacturer: Shenzhen Nine Liyuan Electronic Technology Co., Ltd. Model: H2019GS1A	
USB Cable	120cm Cable, Shielded, Type C Micro USB	
Note: The information of the EUT is declared by the manufacturer.		
2. There are more than one Battery each one should be applied throughout the compliance test respectively, however, only the worst case (Battery1) will be recorded in this report.		



3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC CFR47 Part 2

FCC CFR 47 Part 90S

ANSI C63.26 (2015)

KDB 971168 D01 Power Meas License Digital Systems v03r01

4. Test Configuration

There is more than one SIM card slot, each one should be applied throughout the compliance test respectively, and however, only the worst case (SIM 1) will be recorded in this report.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (Z axis, vertical polarization) and the worst case was recorded.

All mode and data rates and positions were investigated.

Test modes are chosen as the worst case configuration below for CDMA BC10

Test items	Modes/Modulation
	CDMA BC10
RF power output	QPSK
Effective Radiated Power	QPSK
Occupied Bandwidth	QPSK
Band Edge Compliance	QPSK
Peak-to-Average Power Ratio	QPSK
Frequency Stability	QPSK
Spurious Emissions at Antenna Terminals	QPSK
Radiates Spurious Emission	QPSK

5. Test Case Results

5.1. RF Power Output

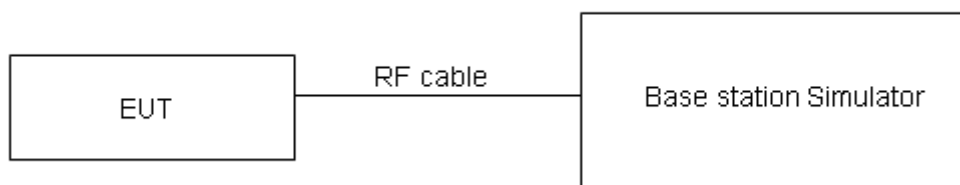
Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Methods of Measurement

During the process of the testing, The EUT is controlled by the Base Station Simulator to ensure max power transmission and proper modulation.

Test Setup



The loss between RF output port of the EUT and the input port of the tester has been taken into consideration.

Limits

Part 90.635 (b) the maximum output power of the transmitter for mobile stations is 100 watts.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4$ dB.

**Test Results**

CDMA BC10		Maximum Output Power (dBm)		
		Channel/Frenqucy(MHz)		
		476/817.9	526/819.15	684/823.1
RC1	SO55 (Loopback)	23.88	23.92	23.78
RC3	SO55 (Loopback)	23.78	23.95	23.80
	TDSO32 (FCH+SCH)	23.69	23.97	23.77
	TDSO32 (FCH)	23.14	23.21	23.18
1x Advanced	SO75	23.92	23.94	23.91
Rev 0	RTAP	23.89	23.97	23.90
Rev A	RETAP	23.84	23.88	23.82

5.2. Effective Radiated Power

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Methods of Measurement

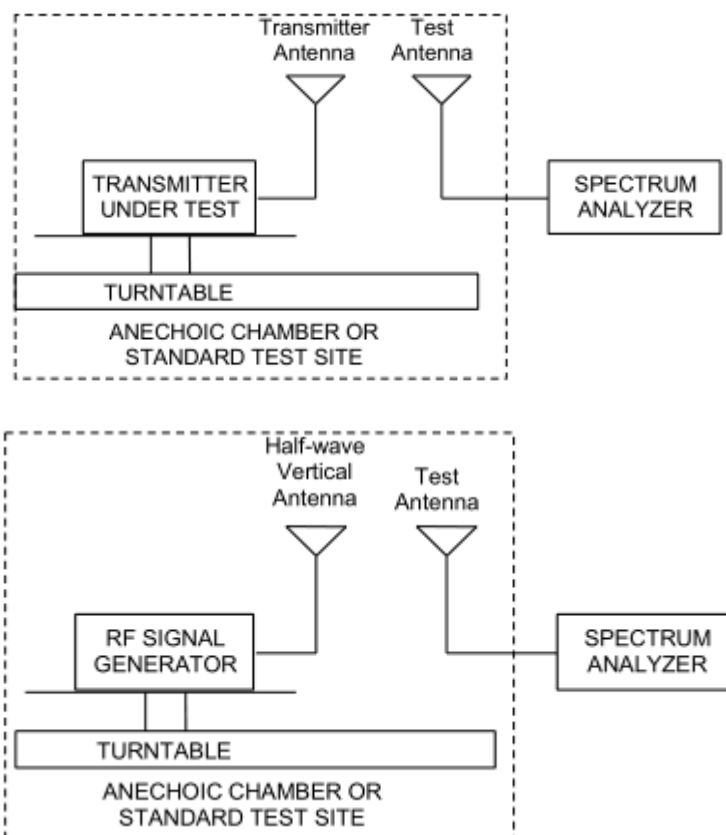
The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI C63.26 (2015).

- Connect the equipment as illustrated. Mount the equipment with the manufacturer specified antenna in a vertical orientation on a manufacturer specified mounting surface located on a non-conducting rotating platform of a RF anechoic chamber (preferred) or a standard radiation site.
- Key the transmitter, then rotate the EUT 360° azimuthally and record spectrum analyzer power level (LVL) measurements at angular increments that are sufficiently small to permit resolution of all peaks. If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading at each angular increment. (Note: several batteries may be needed to offset the effect of battery voltage droop, which should not exceed 5% of the manufactured specified battery voltage during transmission).
- Replace the transmitter under test with a vertically polarized half-wave dipole (or an antenna whose gain is known relative to an ideal half-wave dipole). The center of the antenna should be at the same location as the center of the antenna under test.
- Connect the antenna to a signal generator with a known output power and record the path loss (in dB) as LOSS. If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading. $LOSS = \text{Generator Output Power (dBm)} - \text{Analyzer reading (dBm)}$
- Determine the effective radiated output power at each angular position from the readings in steps b) and d) using the following equation: $ERP \text{ (dBm)} = LVL \text{ (dBm)} + LOSS \text{ (dB)}$
- The maximum ERP is the maximum value determined in the preceding step.
- When calculating ERP, in addition to knowing the antenna radiation and matching characteristics, it is necessary to know the loss values of all elements (e.g. transmission line attenuation, mismatches, filters, combiners) interposed between the point where transmitter output power is measured, and the point where power is applied to the antenna. ERP can then be calculated as follows:
 $EIRP \text{ (dBm)} = \text{Output Power (dBm)} - \text{Losses (dB)} + \text{Antenna Gain (dBi)}$
 where: dBd refers to gain relative to an ideal dipole.
 $EIRP \text{ (dBm)} = ERP \text{ (dBm)} + 2.15 \text{ (dB.)}$

The RB allocation refers to section 5.1, using the maximum output power configuration.

Test configuration

Below 1GHz:



Limits

Rule Part 90.635(b) specifies that “The maximum output power of the transmitter for mobile stations is 100 watts”.

Limit	$\leq 100 \text{ W}$ (50 dBm)
-------	-------------------------------

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 1.19 \text{ dB}$

**Test Results:**

The measurement is performed for both of horizontal and vertical antenna Polarization, and only the data of worst mode is recorded in this report.

CDMA BC10					
Channel	Frequency (MHz)	Polarization	ERP (dBm)	Limit (dBm)	Conclusion
Low	817.9	vertical	17.73	50	Pass
Mid	819.15	vertical	17.83	50	Pass
High	823.1	vertical	17.92	50	Pass

5.3. Occupied Bandwidth

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

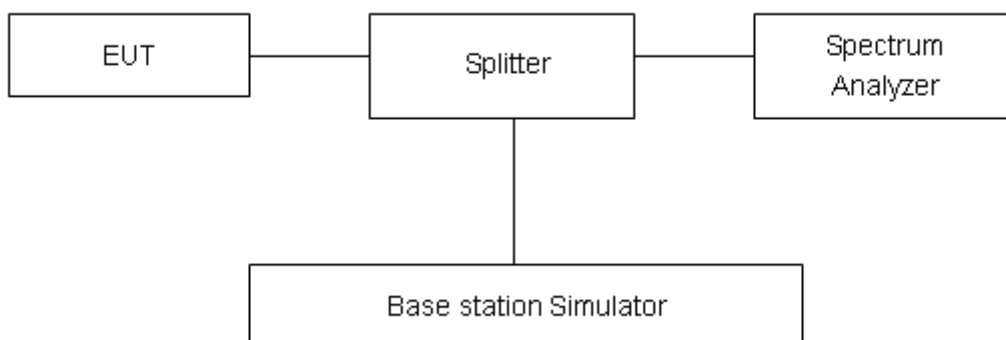
Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.

RBW is set to 15kHz, VBW is set to 51kHz for CDMA BC10,

99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

Part 90.209 (a) Each authorization issued to a station licensed under this part will show an emission designator representing the class of emission authorized. The designator will be prefixed by a specified necessary bandwidth. This number does not necessarily indicate the bandwidth occupied by the emission at any instant. In those cases where part 2.202 of this chapter does not provide a formula for the computation of necessary bandwidth, the occupied bandwidth, as defined in part 2 of this chapter, may be used in lieu of the necessary bandwidth.

Measurement Uncertainty

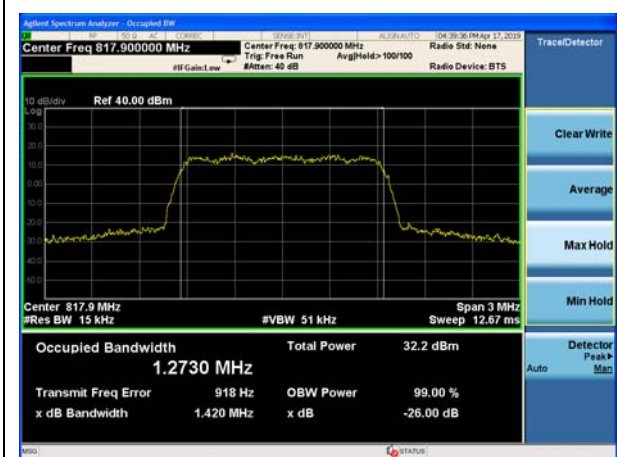
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 624\text{Hz}$.



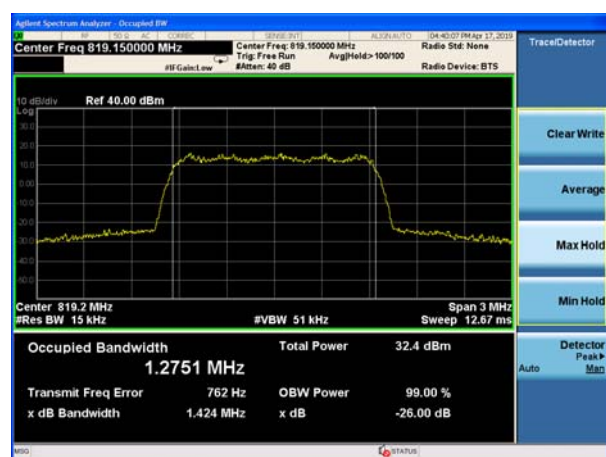
Test Result

Mode	Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth (MHz)
CDMA BC10	476	817.9	1.2730	1.420
	526	819.15	1.2751	1.424
	684	823.1	1.2726	1.422

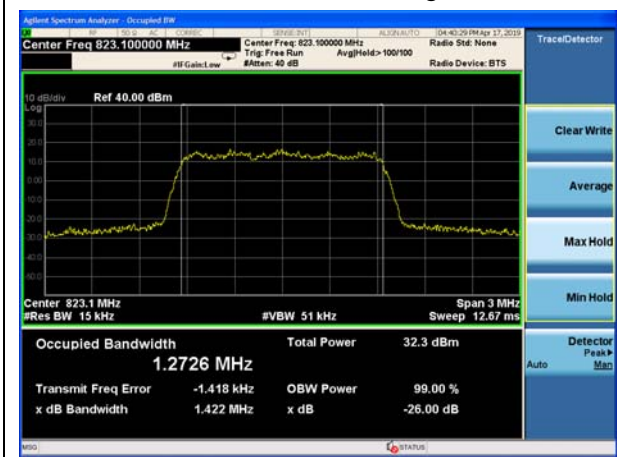
CDMA BC10 CH Low



CDMA BC10 CH Middle



CDMA BC10 CH High



5.4. Emission Mask

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

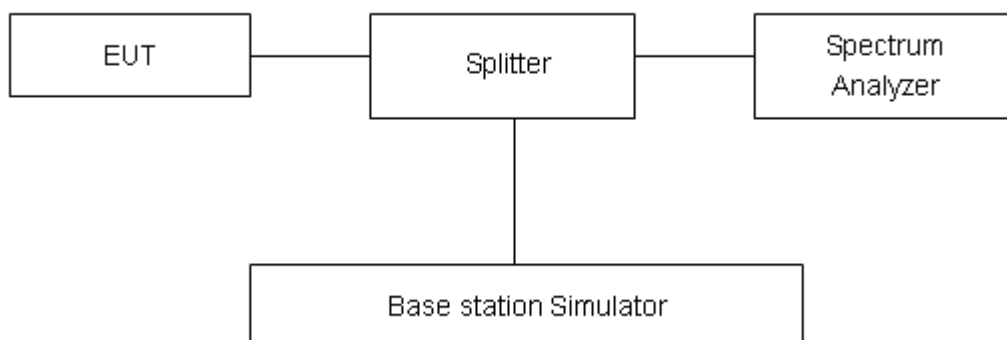
Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The average detector is used.

RBW is set to 15kHz, VBW is set to 51kHz.

Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

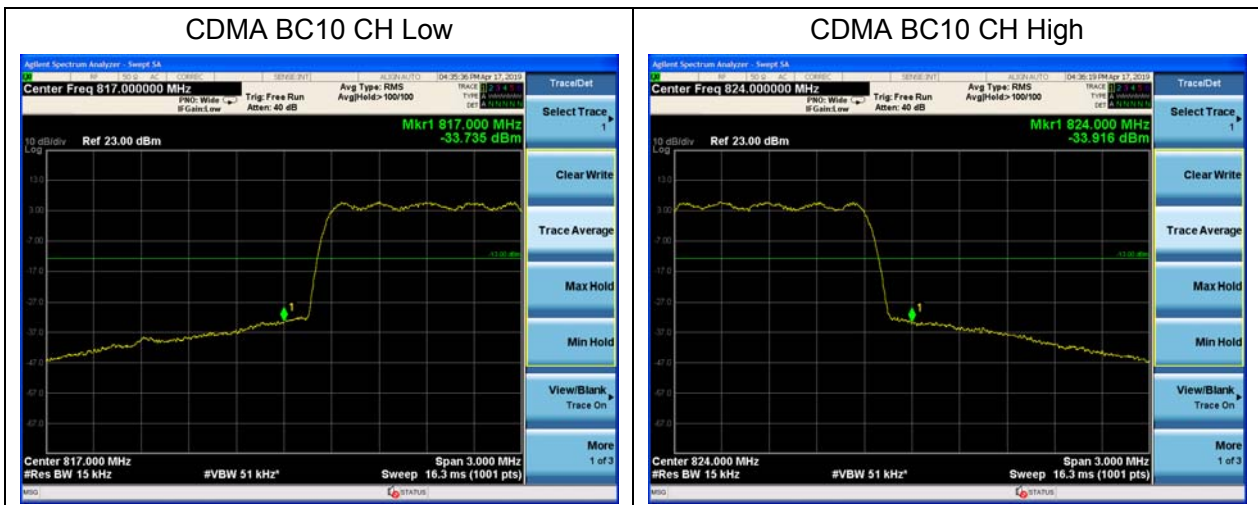
Rule Part 90.691(a) specifies that “ For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.”

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U=0.684\text{dB}$.



Test Result:



5.5. Peak-to-Average Power Ratio (PAPR)

Ambient condition

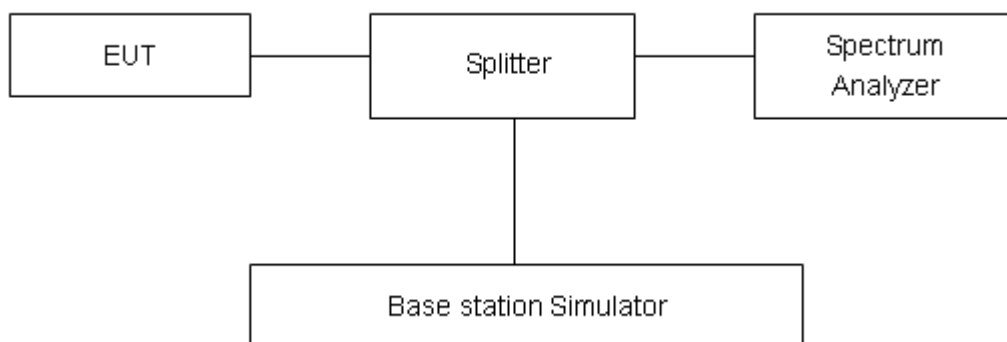
Temperature	Relative humidity
21°C ~25°C	40%~60%

Methods of Measurement

Measure the total peak power and record as PPk. And measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

$PAPR (dB) = PPk (dBm) - PAvg (dBm)$.

Test Setup



Limits

In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB in 24.232(d).

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4$ dB.

**Test Results**

Mode	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
CDMA BC10	476	817.9	27.67	23.56	4.11	13	PASS
	526	819.15	27.72	23.70	4.02	13	PASS
	684	823.1	27.34	23.55	3.79	13	PASS

5.6. Frequency Stability

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Method of Measurement

1. Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +55°C in 10°C step size,

(1) With all power removed, the temperature was decreased to 0°C and permitted to stabilize for three hours.

(2) Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.

(3) Repeat the above measurements at 10°C increments from -30°C to +55°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

2. Frequency Stability (Voltage Variation)

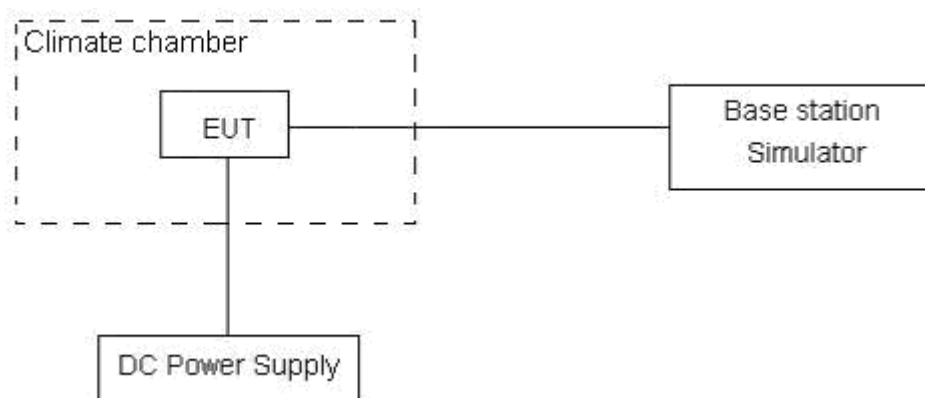
The frequency stability shall be measured with variation of primary supply voltage as follows:

(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

(2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery-operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 3.5 V and 4.4 V, with a nominal voltage of 3.8V.

Test setup



Limits

According to the Sec. 90.213.(a) Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table.

Minimum Frequency Stability

[Parts per million (ppm)]

Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
809-824	1.5	2.5	2.5

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 3$, $U = 0.01$ ppm.

Test Result

CDMA BC10				
Condition		Freq.Error (Hz)	Frequency Stability (ppm)	Verdict
Temperature	Voltage	channel 526		
Normal (25℃)	Normal	-0.60	-0.00114	PASS
Extreme (55℃)		0.90	0.00171	PASS
Extreme (50℃)		0.50	0.00095	PASS
Extreme (40℃)		-0.10	-0.00019	PASS
Extreme (30℃)		1.10	0.00209	PASS
Extreme (20℃)		1.60	0.00304	PASS
Extreme (10℃)		1.70	0.00323	PASS
Extreme (0℃)		0.40	0.00076	PASS
Extreme (-10℃)		1.20	0.00228	PASS
Extreme (-20℃)		-0.20	-0.00038	PASS
Extreme (-30℃)		0.30	0.00057	PASS
25℃	LV	-1.40	-0.00266	PASS
	HV	-1.70	-0.00323	PASS

5.7. Spurious Emissions at Antenna Terminals

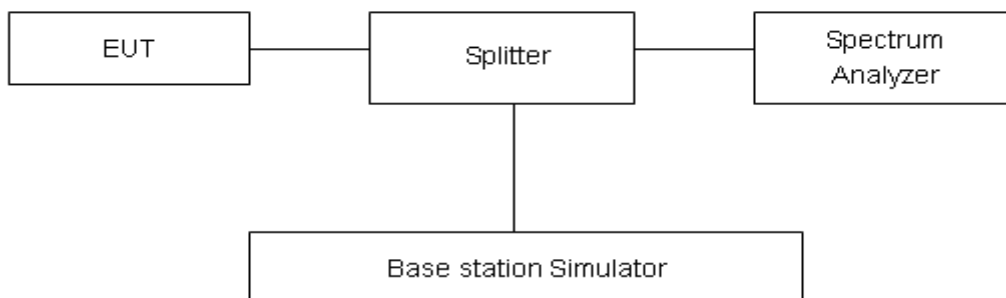
Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. RBW set to 100 kHz and VBW set to 300 kHz, Sweep is set to ATUO.

Test setup



Limits

Rule Part 90.691 specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.”

Limit	-13 dBm
-------	---------

Measurement Uncertainty

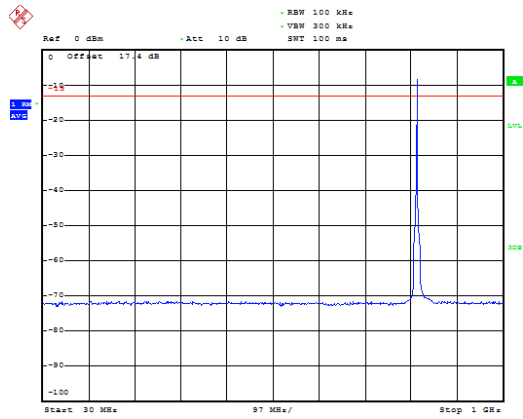
The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
100kHz-1GHz	0.684 dB
1GHz-12.75GHz	1.407 dB

Test Result

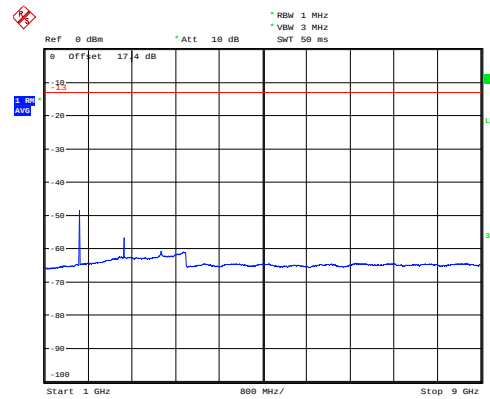
If disturbances were found more than 20dB below limit line, the mark is not required for the EUT.
The signal beyond the limit is carrier.

CDMA BC10 CH Low 30MHz~1GHz



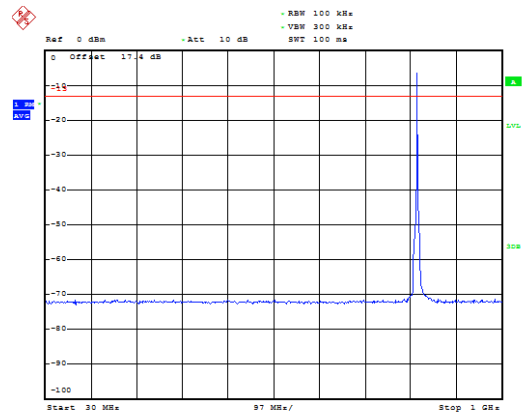
Date: 17.APR.2019 16:44:16

CDMA BC10 CH Low 1GHz~9GHz



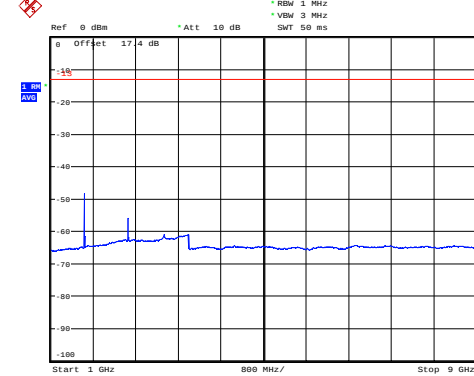
Date: 17.APR.2019 16:45:42

CDMA BC10 CH Middle 30MHz~1GHz



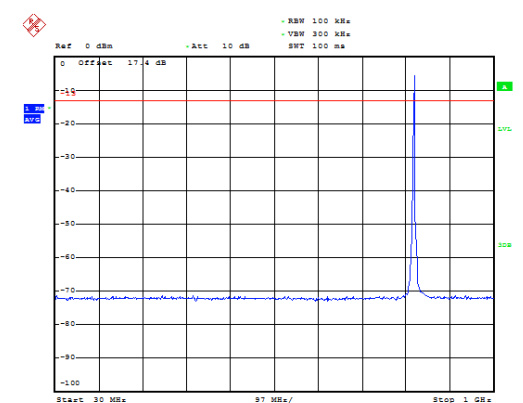
Date: 17.APR.2019 16:44:34

CDMA BC10 CH Middle 1GHz~9GHz



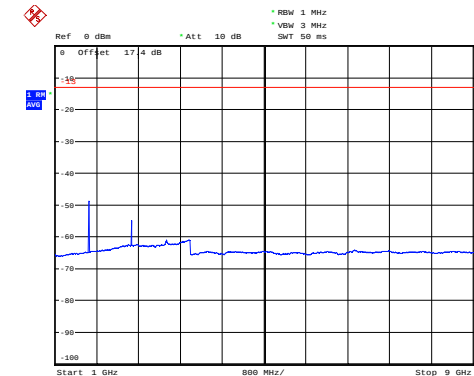
Date: 17.APR.2019 16:45:59

CDMA BC10 CH High 30MHz~1GHz



Date: 17.APR.2019 16:46:59

CDMA BC10 CH High 1GHz~9GHz



Date: 17.APR.2019 16:45:17

5.8. Radiates Spurious Emission

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Method of Measurement

1. The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI C63.26 (2015).
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A loop antenna, A log-periodic antenna or horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=200Hz,VBW=600Hz for 9kHz150kHz , RBW=10kHz, VBW=30kHz 150kHz-30MHz , RBW=100kHz,VBW=300kHz for 30MHz to 1GHz and RBW=1MHz, VBW=3MHz for above 1GHz, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:

$$\text{Power(EIRP)} = \text{PMea} - \text{PAg} - \text{Pcl} + \text{Ga}$$
The measurement results are amend as described below:

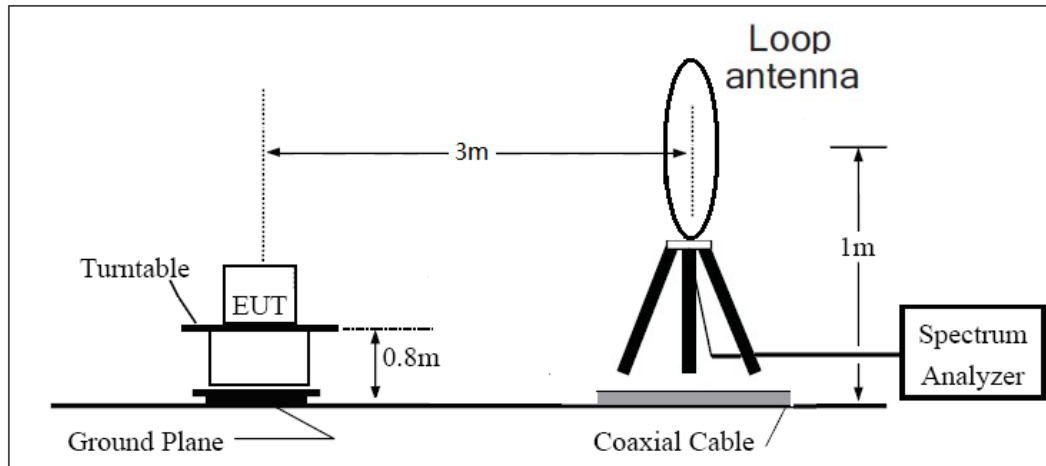
$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi)

and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.

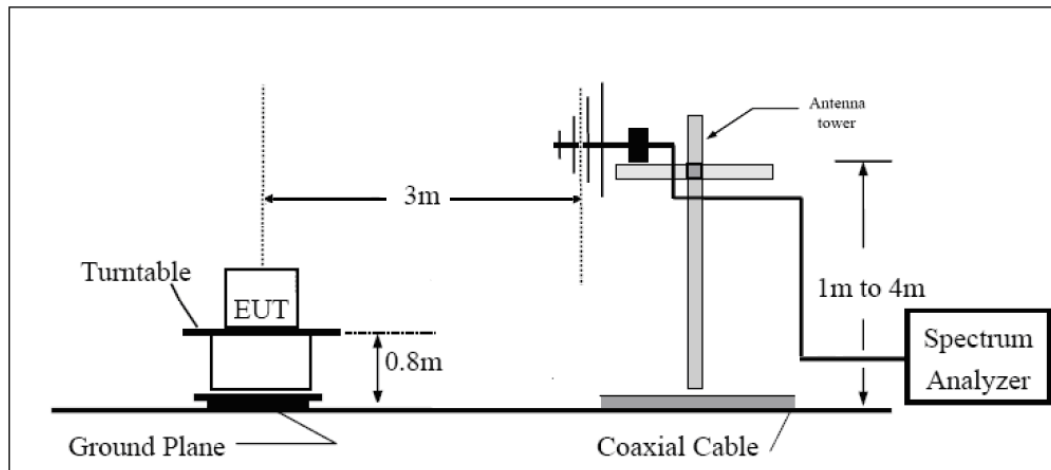
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

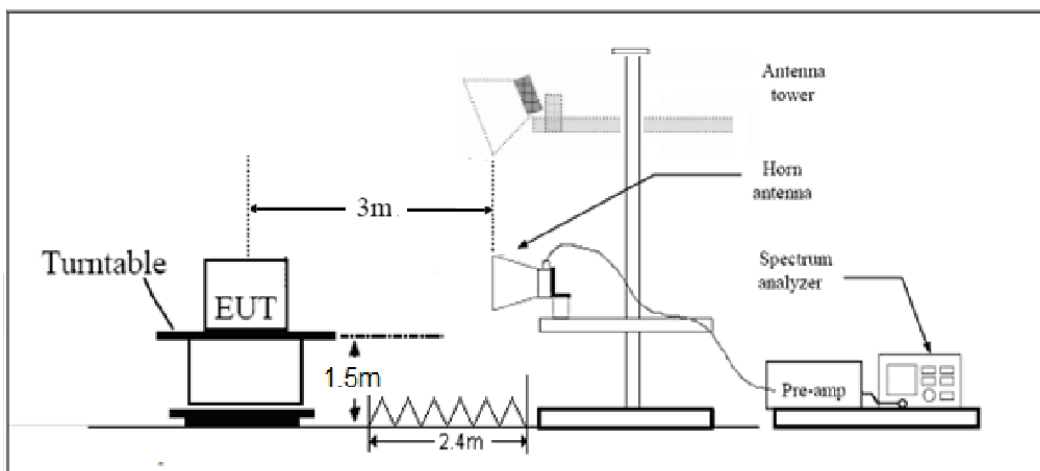
9KHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz





Limits

Rule Part 90.691 specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.”

Limit	-13 dBm
-------	---------

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 3.55$ dB.

**Test Result**

Sweep the whole frequency band through the range from 30MHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

CDMA BC 10 CH Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1678.7	-62.93	2.00	10.75	vertical	-56.33	-13.00	43.33	90
3	2517.8	-63.16	2.51	11.05	vertical	-56.77	-13.00	43.77	180
4	3354.8	-62.39	4.20	11.15	vertical	-57.59	-13.00	44.59	45
5	4196.3	-60.18	5.20	11.15	vertical	-56.38	-13.00	43.38	90
6	5038.5	-58.58	5.50	11.95	vertical	-54.28	-13.00	41.28	225
7	5876.6	-60.19	5.70	13.55	vertical	-54.49	-13.00	41.49	135
8	6717.4	-57.72	6.30	13.75	vertical	-52.42	-13.00	39.42	315
9	7554.4	-55.89	6.80	13.85	vertical	-50.99	-13.00	37.99	0
10	8393.6	-55.31	6.90	14.25	vertical	-50.11	-13.00	37.11	180
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2.The worst emission was found in the antenna is Horizontal position.									

CDMA BC 10 CH Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1684.9	-62.83	2.00	10.75	vertical	-56.23	-13.00	43.23	180
3	2526.6	-63.20	2.51	11.05	vertical	-56.81	-13.00	43.81	225
4	3367.5	-62.48	4.20	11.15	vertical	-57.68	-13.00	44.68	45
5	4209.8	-60.16	5.20	11.15	vertical	-56.36	-13.00	43.36	90
6	5053.9	-58.03	5.50	11.95	vertical	-53.73	-13.00	40.73	225
7	5895.8	-58.81	5.70	13.55	vertical	-53.11	-13.00	40.11	315
8	6738.0	-56.48	6.30	13.75	vertical	-51.18	-13.00	38.18	135
9	7581.4	-55.28	6.80	13.85	vertical	-50.38	-13.00	37.38	0
10	8425.9	-55.07	6.90	14.25	vertical	-49.87	-13.00	36.87	180
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2.The worst emission was found in the antenna is Horizontal position.									

CDMA BC 10 CH High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1693.6	-59.80	2.00	10.75	vertical	-53.20	-13.00	40.20	315
3	2540.4	-62.53	2.51	11.05	vertical	-56.14	-13.00	43.14	90
4	3387.2	-64.14	4.20	11.15	vertical	-59.34	-13.00	46.34	315
5	4234.0	-59.21	5.20	11.15	vertical	-55.41	-13.00	42.41	45
6	5080.8	-57.60	5.50	11.95	vertical	-53.30	-13.00	40.30	90
7	5927.6	-58.41	5.70	13.55	vertical	-52.71	-13.00	39.71	0
8	6774.4	-56.40	6.30	13.75	vertical	-51.10	-13.00	38.10	315
9	7621.2	-54.16	6.80	13.85	vertical	-49.26	-13.00	36.26	225
10	8468.0	-54.68	6.90	14.25	vertical	-49.48	-13.00	36.48	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Universal Radio Communication Tester	Agilent	E5515C	MY48367192	2018-05-20	2019-05-19
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	/	/
Spectrum Analyzer	Agilent	N9010A	MY50210259	2018-05-20	2019-05-19
Signal Analyzer	R&S	FSV30	100815	2018-12-16	2019-12-15
Trilog Antenna	SCHWARZBECK	VUBL 9163	9163-201	2017-11-18	2020-11-17
Horn Antenna	R&S	HF907	100126	2018-07-07	2020-07-06
Signal generator	R&S	SMF 100A	102235	2018-05-20	2019-05-19
Climatic Chamber	ESPEC	SU-242	93000506	2017-12-17	2020-12-16
RF Cable	Agilent	SMA 15cm	0001	2019-03-15	2019-06-14
Software	R&S	EMC32	9.26.0	/	/

*****END OF REPORT *****



ANNEX A: EUT Appearance and Test Setup

The Detailed EUT Appearance and Test Configuration refer to *EUT Appearance* and *Part90 Test Setup*.