

GENERAL INFORMATION

General Information in accordance with the Federal Communications Commission Rules and Regulations, Volume II, Part 2.

(1) Applicant: Uniden America Corporation
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Lake City, South Carolina 29560
Mr. James R. Haynes, Vice President

(2) FCC Identifier: FCC ID: AMWUP009R
MODEL: EXT3165(XX) for handset

(3) Instruction Manual: Refer to User Manual

(4) Circuit Description: Refer to Operational Description

(5) Circuit & Block Diagrams: Refer to Block / Schematics

(6) Measurement Data: Refer to Test Report

The following conditions and procedures were followed during testing of the equipment.

Room Temperature: 23 - 27 Degrees Celsius
Room Humidity: 40 - 60 %
Power Supply: Ni-cd Battery for Handset

(7) Photographs : Refer to External Photos

(8) Peripheral or Accessory Device: Not used

(9) Transition provisions in section 15.37 Rules:

This equipment complies with the new Part 15
of FCC Rules and is not affected by Section 15.37.

(10) Decoding the Emergency Broadcast System Attention Signal:

Not Applicable

(11) Direct Sequence Spread Spectrum Transmitter: Not Applicable

(12) Digital Security Code Information:

Refer to Operational Description

CIRCUIT DESCRIPTION AND DIGITAL SECURITY CODE INFORMATION

Equipment Description

UP009BH

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This 2.4GHz/900MHz cordless telephone is a telephone terminal device that is designed for voice operation in a similar fashion to an ordinary residential or business telephone without the inconvenience and restraint of a handset cord.

This device consists of a base unit and a handset. The base unit is connected to a standard telephone modular jack (USOC RJ 11C Type) and is supplied electric power from a standard AC power line by using with the AC Adapter. The handset is powered from an internal battery pack.

This device operates by means of a full duplex radio frequency TX/RX system in 2400 - 2483.5 MHz and 902 - 928 MHz band. These radio frequency systems operate in accordance with Part 15 of the FCC Rules.

This device has been specifically designed to comply with the requirements set forth in Part 68 of the FCC Rules as well as the Part 15 requirements.

Circuit Description and Operating Frequency

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Overview

This device is a Cordless Telephone System that operates within the 2.4GHz and 900MHz ISM band. This device consists of a base unit and a handset. The base unit is connected to a telephone network, and has transmitter and receiver circuits that are served to communication with the handset. The handset also has a transmitter and receiver portions in addition to regular dialing circuit.

Both the handset and the base unit have PLL circuits that enable to communicate in an empty channel. Pressing the CH key on the handset can last the communications moving into other open channel without cutting the line even if interfered by interruption on talks.

1. Handset

1) Local Frequencies and Intermediate Frequencies

TX VCO Frequency:	462.357913 MHz	-	463.352231 MHz
RX 1st Local Freq.:	1612.054718 MHz	-	1616.031990 MHz
RX 2nd Local Freq.:	806.027359 MHz	-	808.015995 MHz
RX VCO Frequency:	403.013679 MHz	-	404.007997 MHz
1st Intermediate Frequency:	795.487587 MHz	-	797.476224 MHz
2nd Intermediate Frequency:	10.5397714 MHz		
Reference/Clock Frequency:	4.176136 MHz		

2) Communication Link to Base unit

RX Circuit:

An incoming RF signal from the base unit is received through the antenna. RX VCO frequency is produced by COMBO IC (IC801) and doubled in COMBO IC (IC801). Then, this doubled frequency (806.027359 – 808.015995) is the 2nd RX Local frequency. And DOUBLER (Q804) produces 1st RX Local frequency from this doubled frequency.

This 1st local signal is applied to Mixer (Q803) that produces 1st IF of 795.487587 MHz – 797.476224 MHz. This 2nd local signal is applied to Mixer (included in IC801) that produces 2nd IF of 10.539771 MHz. The demodulated AF signal is amplified by IC801 an internal audio amplifier for driving a speaker.

TX Circuit:

TX VCO signal is generated at the PLL circuit and the TX VCO (IC801). Meanwhile, voice signal from the microphone (MC601) modulates the TX VCO signal at IC801. Then, this moderated signal is doubled by DOUBLER (included in IC801). This doubled signal is the TX RF frequencies as listed in frequency chart.

Then, the TX RF signal is amplified by RF AMP (included in IC801) and fed into the antenna.

3) Dialing Signal

When this equipment is in Talk Mode, the transmitting circuit and dialing circuit are activated to make outgoing call. In this condition, when any number keys are pressed, the CPU (IC601) generates corresponding dial pulse codes.

Digital Security Code Information

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262144 Digital Security Code

This cordless telephone system automatically selects a different security code from 262144 possible discrete digital codes each time the cordless telephone is used.

Furthermore, the security code can be changed randomly by pressing 'find handset' button on the base unit when the handset is placed in the base unit.

[APPENDIX] TEST MODE AND OPERATION FREQUENCY

TEST MODE

This cordless telephone has test mode function which enable to perform TX/RX testing.

Test Mode for Handset

First, disconnect the battery pack. Then, connect the battery pack again while pressing # and * keys. When test mode is set up, long beep tone is heard. The unit is set for CH 13 Transmitting mode. Every pressing the CHANNEL key, channel is changed as below.

13 10 17 20 3 1 2 3 - - - 19 20 1 2 3 4 ---

To cancel the test mode, press the TALK key.

FREQUENCY TABLE

CHANNEL	PORTABLE (TX FREQUENCY)
1	924.715789 MHz
2	924.815221 MHz
3	924.914652 MHz
4	925.014084 MHz
5	925.113516 MHz
6	925.212948 MHz
7	925.312380 MHz
8	925.411811 MHz
9	925.511243 MHz
10	925.610675 MHz
11	925.710107 MHz
12	925.809539 MHz
13	926.008402 MHz
14	926.107834 MHz
15	926.207266 MHz
16	926.306698 MHz
17	926.406130 MHz
18	926.505561 MHz
19	926.604993 MHz
20	926.704425 MHz