KW9007W-S/M (2) WEATHER STATION (WWVB VERSION RC-NONE)

USER MANUAL

1. Features

1.1   Weather Forecast   -   Sunny, Slightly Cloudy, Cloudy, Rainy and Snow animation

1.2   Time   -   12/24 hour user selectable
-    Dual Daily Alarm function
-    Daily Sunrise/Sunset, Moonrise/Moonset time for 3 countries
-    Moon Phase display
-    Perpetual Calendar Up to Year 2099
-   Day of week in 8 languages user selectable

1.3   Barometric Pressure   -   Current and past 12hr Absolute and Relative Barometric Pressure reading
-    Barometric Pressure bar chart
-    Measures mb/hPa, inHg &mmHg user selectable

1.3   Humidity   -   Measurable range: 20 ~ 99%
-    Max/Min Memory

1.4   Temperature   -   Indoor measurable range: 0 ~ 50°C [+32 ~ +122°F]
-    Measures °C / °F user selectable
-    Outdoor measurable range: -20 ~ 50°C [-4 ~ +122°F]
-    Max/Min Memory [indoor & outdoor]

1.5   Wireless Outdoor Sensor   -   Low-battery indicator for Outdoor Thermo Sensor
-    Wall Mount or Table Stand
-    One Wireless Thermo Sensor Included
-    433MHz RF transmitting frequency
-    30 meter [98 feet] transmission range in an open area

2. Main Unit Appearance
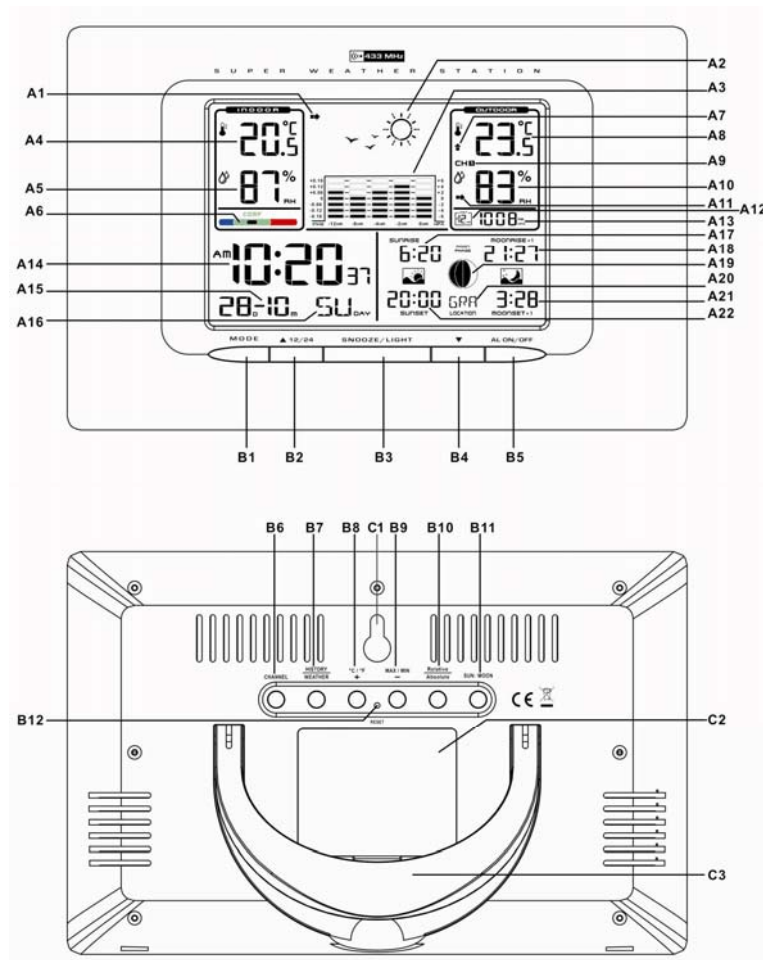
2.1 Part A- LCD

A1: Air Pressure Trend
A2: Weather Forecast
A3: Barometric Pressure Bar Graph
A4: Indoor Temperature
A5: Indoor Humidity
A6: Comfort Indicator Bar
A7: Outdoor Temperature Trend
A8: Outdoor Temperature
A9: Selected Channel
A10: Outdoor Humidity
A11: Outdoor Humidity Trend

A12: Barometric pressure of previous hour
A13: Absolute/Relative Barometric Pressure Reading
A14: Time
A15: Date
A16: Day Of Week
A17: Sunrise Time
A18: Moonrise Time
A19: Moon phase
A20: Location
A21: Moonset Time
A22: Sunset Time

2.2 Part B- Buttons

B1: "MODE" button
B2: "▲/ (12/24)" button
B3: "SNOOZE/LIGHT" button
B4: "▼" button
B5: "AL ON/OFF" button
B6: "CHANNEL" button

B7: "HISTORY/WEATHER" button
B8: "+/C/F" button
B9: "-/MAX/MIN" button
B10: "RELATIVE/ABSOLUT" button
B11: "SUN/MOON" button
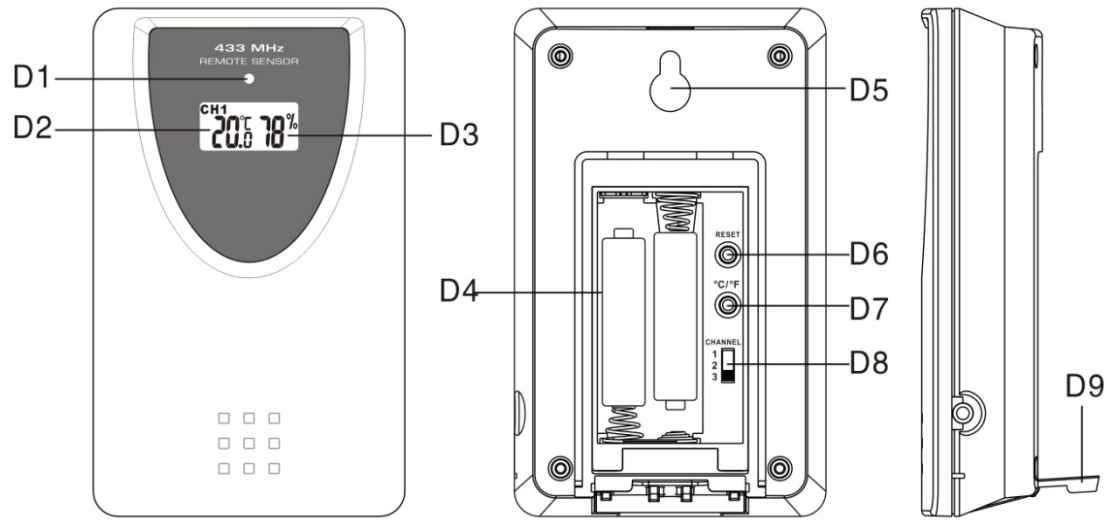B12: "RESET" button

2.3 Part C- Structure

C1: Wall Mount Hole   C2: Battery Cover

C3: Stand

3. Outdoor Thermo Sensor

D1: Transmission Indication LED   D6: "RESET" button

D2: Outdoor Temperature display   D7: "C/F" button

D3: Outdoor Humidity display   D8: Channel Select Switch

D4: Battery Compartment   D9: Stand

D5: Wall Mount Hole

4. Getting Started:

4.1 Main Unit:

● Open main unit battery compartment cover [C2]

● Insert 3 x AA batteries observing polarity ["+" and " –" marks]

● Replace main unit battery compartment cover [C2]

● Use a pin to press the RESET [B12] button on the rear of the main unit, the main unit is now ready for use

4.2 Outdoor Thermo Sensor

● Batteries compartment (D4) of thermo sensor is locating behind the back cover, unscrews the batteries cover to open.

● Insert 2 x AAA batteries observing polarity ["+" and "–" marks]

5. Installation

5.1 Main Unit

The main unit can be placed onto any flat surface (C3), or wall mounted by the hanging hole (C1) at the back of the unit.

5.2 Outdoor Thermo sensor

The remote sensor should be securely mounted onto a horizontal surface.

Note: Transmissions between receiver and transmitter can reach up to 30m in open area.   Open Area: there are no interfering obstacles such as buildings, trees, vehicles, high voltage lines, etc.

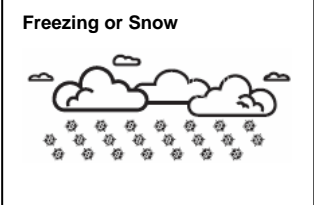# 6. Weather Forecast Function

6.1 Operation

- After Batteries inserted, or holding "WEATHER" button (B7) for 3 seconds, weather icon flash (A2) on the LCD. Enter the current weather by pressing "-" (B9) or "+ "(B8) button. Press "WEATHER" (B7) button to confirm the setting. The weather forecast may not be accurate if the current weather entered is not correct.
- The current weather status should be entered again if the altitude of the Main Unit is changed. (Barometric pressure is lower at higher altitude location. Therefore, altitude change will affect the weather forecast). The weather station will start the first forecast at 6 hours later after the current weather status is entered.

6.2 Weather Conditions

There are totally 5 different weather status animations in the weather forecast.
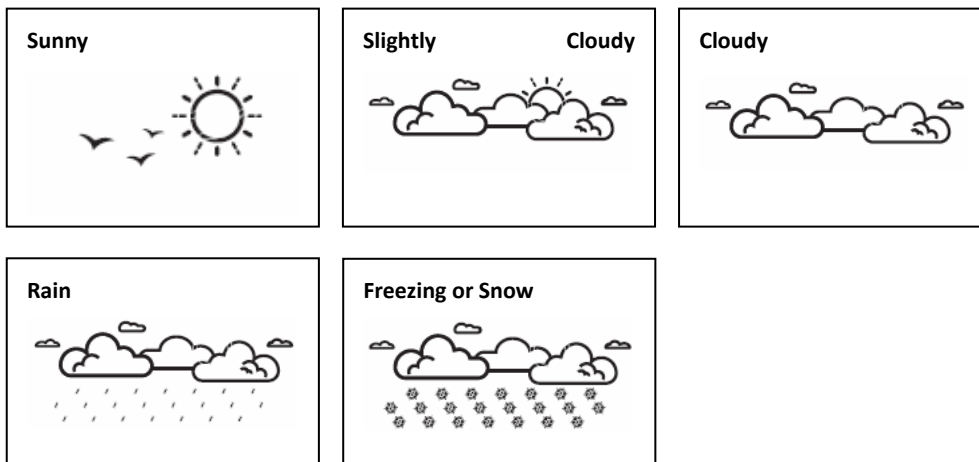
Note:

- " " is shown if the weather forecast is Rainy and outdoor temperature (any channel) under 0 ° C.

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- *Frost Alert: "❄" is shown if the outdoor temperature (any channel) is between -2 ° C ~ +3 ° C*
- *If there is any inconsistency of weather forecast between Local Weather Station and this unit, the Local Weather Station's forecast should prevail. The manufacture will not hold responsible for any trouble that may come up due to wrong forecasting from this unit.*

7. Barometric Pressure Reading

7.1 Barometric Trend Pointer (A1)
The trend pointer displayed on the LCD (A1) indicates the trend of the Barometric pressure.

⬆	➡	⬇
Indicating the barometric pressure trend is rising	Indicating the barometric pressure trend is steady	Indicating the barometric pressure trend is falling

7.2 Absolute / Relative Air Pressure
- Press the "Absolute / Relative" button [B10] to toggle between Absolute or Relative pressure display.
  "ABS" is shown for Absolute Pressure; "REL" is shown for Relative pressure
- Absolute pressure is the actual pressure measured by the Main Unit
- When viewing Relative pressure, hold "Absolute/Relative" button [B10] for 3 seconds, press "-" (B9) or "+ "(B8) button to adjust, press "Absolute / Relative" button [B10] to confirm.
  Note: Check your local weather station for Sea Level pressure information

7.3 Past Hour Air Pressure (History) Reading
- Press "HISTORY" button [B7] to view the past 12 hour's Barometric Pressure history. The hour is indicated on LCD [A12]

Press "HISTORY" button		
HIST -2 HR **1005** MB HPA	➡	**HIST** -3 HR **1008** MB HPA
✧ 0 HR = Current Barometric Pressure Reading		
✧ -1HR = Barometric Pressure Reading in 1 hour ago		
✧ -2HR = Barometric Pressure Reading in 2 hour ago ....etc		

- Hold "+" button [B8] for 3 seconds to select the unit for barometric pressure meter in hPa, inHg or mmHG.

7.4 Barometric Pressure Bar Graph

The Barometric Pressure Reading at 0hr, –2hr,-4hr,-8hr,-12hr is recorded and shown on Barometric Pressure Bar Graph [A3]. The Graph is displayed in both hPa and inHg

8. Thermometer

8.1 RF Transmission Procedure:

● The main unit automatically starts receiving transmission from outdoor thermo sensor for outdoor temperature after weather condition setting.

● The thermo sensor unit will automatically transmit temperature to the main unit after batteries inserted. For having more than one external transmitter (Maximum3), select the Channel, CH1, CH2 or CH3 to ensure each sensor is transmitting difference channel before inserting batteries. The channel select switch (D8) is at the back of the thermo sensor.

● If main unit failed to receive transmission from outdoor thermo sensor in first 3 minutes after the batteries inserted ("- - . –"display on the LCD), hold "Channel" button (B6) for 3 seconds to receive transmission manually. RF icon " " flashes on the LCD

Note: *"WEATHER/HISTROY" (B7), "+/C/F" (B8), "-/MAX/MIN"(B9), "ABSOLUTE/RELATIVE" (B10) buttons will not function while scanning for thermo sensor's signal unless they are well received or stopped manually.*

8.2 Temperature & Humidity

(1) Outdoor Temperature--- Channel Selection

● Press "CHANNEL" button (B6) to view the 3 Channels' temperature & humidity. The sequence is shown as follow:

● When viewing the record on CHANNEL 1 or 2, or 3, hold "CHANNEL" button (B6) for 3 seconds to cancel the record on this channel manually, and receive the transmission automatically again.

(2) Maximum / Minimum Temperature and Humidity

● Press "MAX/MIN" button (B9) to show the maximum recorded Indoor /Outdoor Temperature and Humidity. "**MAX**" is shown on the LCD

● Press "MAX/MIN" button (B9) again to show the minimum recorded Indoor/Outdoor Temperature and Humidity. "**MIN**" is shown on the LCD.

(3) Outdoor Temperature Trend

- The trend pointer (A7) displayed on the LCD indicates the trend of the outdoor temperature.

⬆	➡	⬇
Indicating the outdoor temp. is rising	Indicating the outdoor temp. is steady	Indicating the outdoor temp. is falling

(4) Outdoor Humidity Trend

- The trend pointer (A11) displayed on the LCD indicates the trend of the outdoor humidity.

⬆	➡	⬇
Indicating the outdoor humidity is rising	Indicating the outdoor humidity is steady	Indicating the outdoor humidity down

(5) Celsius / Fahrenheit

- Press "°C /°F" button (B8) to select Indoor/Outdoor Temperature in Celsius mode or Fahrenheit mode.
- If the temperature is out of the measurable range, LL.L (beyond the minimum temperature) or HH.H (beyond the maximum temperature) will be shown on the LCD.

(6) Comfort Indicator Bar (A6) for the display of pleasant/unpleasant climate, when the black dot in green zone means pleasant climate.

9. Time and Alarm Setting

9.1 Manual Time Setting:

- Hold "MODE" button (B1) for 3 seconds to enter Clock/Calendar setting mode.
- Press "▲" (B2) or "▼" (B4) button to adjust the setting and press "MODE" button (B1) to confirm each setting.
  (By keeping the "▲" (B2) or "▼" (B4) button pressed, could accelerate the process and reach the desired value more quickly)
- The setting sequence is shown as follow: Hour, Minutes, Second, Year, Month, Day, Country, City.

Note:

(1) Second adjusted to zero only.

(2) The Time Setting Mode will automatically exit in 15 seconds without any adjustment.

(3) To turn DST (Daylight Savings Time) on or off, press and hold the "▲/ (12/24)" (B2) button. When "DST" is displayed above the minute digits Daylight Savings Time is turned on. The sunrise/sunset times will adjust accordingly.
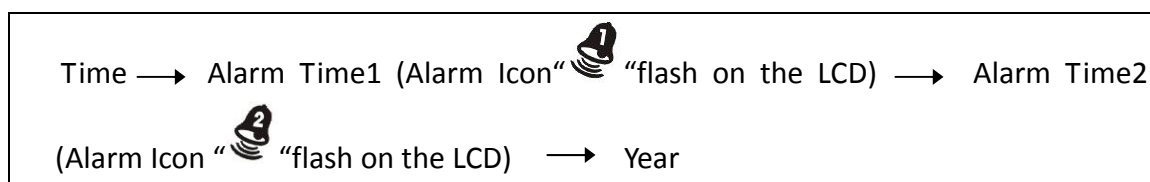
9.2 12/24 Hour Display mode:

Press "12/24" button (B2) to select 12 or 24 hours mode.

9.3 Dual Daily Alarm Function:

- Press " MODE" button (B1) to select to view:

Time ⟶ Alarm Time1 (Alarm Icon" 🔔 "flash on the LCD) ⟶ Alarm Time2 (Alarm Icon " 🔔 "flash on the LCD) ⟶ Year

- When viewing Alarm Time 1 or Alarm Time 2, hold "MODE" button (B1) for 3 seconds to enter that Alarm Time setting. Press "▲" (B2) or "▼" (B4) button to adjust the alarm time, press "MODE" button (B1) to confirm the setting.

- When viewing Alarm Time 1 or Alarm Time 2, press "AL ON/OFF" (B5) button to activate the alarm function. Alarm icon " 🔔 " or " 🔔 "will be shown on the LCD. Press "AL ON/OFF" (B5) button again to deactivate the alarm function, the alarm icon " 🔔 " or " 🔔 " disappear from the display.

- When Alarming, press "SNOOZE / LIGHT" button (B3) to activate the snooze alarm, alarm icon (" 🔔 " or " 🔔 ") flashes on LCD. The alarm will snooze for 5 minutes, then it alarms again. This snooze function can be enabled for maximum 7 times.

- Press any of "MODE" (B1) "▲/12/24" (B2), "▼" (B4), "AL ON/OFF" (B5), OR "SUN/MOON" (B11) button to stop the snooze alarm. Otherwise, the alarm signal sounds for about 2 minutes, then stops automatically.

10. Sunrise/Sunset, Moonrise/Moonset Time Display Function

- After setting the Calendar, Local Country and home city in the Time Setting Mode, the main unit calculates the Sunrise/Sunset &Moonrise/Moonset. The

Sunrise/Sunset & Moonrise/Moonset time digits blink during the calculation.

- Press the "SUN/MOON" button (B11) to the display the total Sun Hours of the select day.
- Hold the "SUN/MOON" button (B11) for 3 seconds to enter Sunrise/ Sunset, Moonrise/Moonset Time search mode, location digits (A20) blink.
- Enter the "Country", "City", "Year", "Month" and "Day" which you would like to check. Press the "▲" [B2] or "▼"[B4] button to adjust and press the "SUN/MOON" button (B11) to confirm setting.
- The Sunrise / Sunset, Moonrise/Moonset time digits blink during the calculation. After calculation, Sunrise/Sunset and Moonset/Moonrise time is shown.
- If moonrise or moonset occurs at next day, then "MOONRISE +1" or "MOONSET +1" will be displayed. If there is no moonrise or moonset occur on someday, "● ¦ ● ●" will be displayed on the LCD

Note: The Sunrise/Sunset and Moonrise/ Moonset time display is just for reference only. For exact Sunrise/Sunset and Moonrise/Moonset time, please refer to your Local Weather Station

11. Moon Phase Display

The Moon Phase (A19) of each day is shown on the LCD.
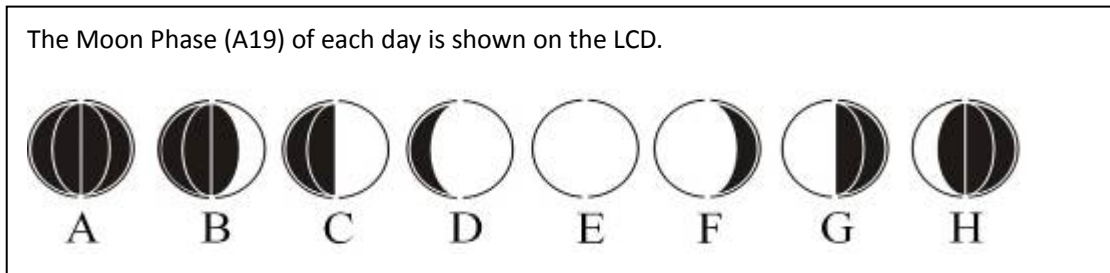
A: New Moon   B: Waxing Crescent   C: First Quarter
D: Waxing Gibbous   E: Full Moon   F: Waning Gibbous
G: Last Quarter   H: Waning Crescent

12.   Low battery indication:

The low battery icon "⊠" will appear at particular channel indicating that thermo sensor unit of the channel is in low battery status. The batteries should be replaced.

13.   Backlight

Press "SNOOZE/LIGHT" button (B3), back light states for 3 seconds.

14. *Precautions*

- *Use a pin to press the reset button (B12) if the Unit does not work properly.*
- *Avoid placing the clock near interference sources/metal frames such as computer or TV sets.*
- *The clock loses its time information when the battery is removed.*
- *Do not expose it to direct sunlight, heavy heat, cold, high humidity or wet areas*
- *The outdoor sensor must not be set up and installed under water. Set it up in away direct sunlight and Rain*
- *Never clean the device using abrasive or corrosive materials or products. Abrasive cleaning agents may scratch plastic parts and corrode electronic circuits*
- *If there is any inconsistency of weather forecast between Local Weather Station and this unit, the Local Weather Station's forecast should prevail. The manufacturer will not take responsible for incorrect forecasting from this unit*

15. Specifications

Indoor Data:	
Temperature range:	0 to 50°C [+32 to +122°F]
Temperature Units Measured:	°C or °F [switchable]
Humidity Range:	20% to 99%
Air Pressure Range:	850 – 1050 hPa
Air Pressure Units Measured:	mb/hPa, inHg & mmHG [switchable]
Weather Forecast:	5 icons [sunny, slightly cloudy, cloudy, rainy & snow]
Outdoor Data:	
Transmission distance: (open area)	30m @ 433MHz
Temperature range:	-20°C to 50°C [-4 to +122°F]
Mount:	wall / table
Main Unit Dimensions:	W230 x h150 x d30 mm
Thermo Sensor Dimensions:	w62 x h101 x d24 mm
Battery Requirements:	
Base Station [indoor]:	3 x AA batteries
Sensors [outdoor]:	2 x AAA batteries

Countries and Cities: there are 3 countries can be chosen from the Time Setting Mode. They are listed in the following table.

USA	USA	Iowa	IA	Mississippi	MS
Alaska	AK	Waterloo	ALO	Greenwood	GWO
Juneau	JNU	Des Moines	DSM	Huntsville	HUV
Alabama	AL	Davenport	DVN	Jackson	JAN
Birmingham	BHM	Sioux City	SUX	Tupelo	TUP
Gadsden	GAD	Idaho	ID	Montana	MT
Montgomery	MGM	Boise	BOI	Billings	BIL
Mobile	MOB	Gibbonsville	GIB	Ft. Peck	FTP
Arkansas	AR	Pocatello	PIH	Great Falls	GFT
Fort Smith	FSM	Sandpoint	SZT	Helena	HLN
Little Rock	LIT	Illinois	IL	Sidney	SDY
Texarkana	TXK	Champaign	CMI	Whitefish	WTF
Arizona	AZ	Chicago	ORD	North Carolina	NC
Flagstaff	FLG	Springfield	SPI	Asheville	AVL
Phoenix	PHX	Indiana	IN	Charlotte	CLT
Tucson	TUS	Evansville	EVV	Fayetteville	FAY
Yuma	YUM	Terre Haute	HUF	Wilmington	ILM
California	CA	Indianapolis	IND	Winston-Salem	INT
Bakersfield	BFL	South Bend	SBN	Williamston	MCZ
Blythe	BLH	Kansas	KS	Raleigh	RDU
Eureka	EKA	Dodge City	DDC	North Dakota	ND
Fresno	FAT	Wichita	K32	Bismarck	BIS
Fort Bragg	FTB	Kansas City	KCK	Bowbells	BWB
Los Angeles	LAX	Wakeeney	OH1	Fargo	FAR
Redding	ROD	Topeka	TOP	Grand Forks	GFK
Sacramento	SAC	Kentucky	KY	Nebraska	NE
San Diego	SAN	Frankfort	FFT	Grand Island	GRI
San Bernardino	SBD	Lexington	LEX	Lincoln	LNK
San Francisco	SFO	Louisville	LOU	Omaha	OMA
Colorado	CO	Louisiana	LA	Sidney	SNY
Denver	DEN	Baton Rouge	BTR	Valentine	VTN
Durango	DRO	Lake Charles	CWF	New Hampshire	NH
Fort Collins	FNL	Natchitoches	IER	Concord	CON
Grand Junction	GJT	New Orleans	NEW	New Jersey	NJ
Burlington	ITR	Shreveport	SHV	Newark	EWR
Pueblo	PUB	Massachusetts	MA	Trenton	TTN
Connecticut	CT	Boston	BOS	New Mexico	NM
Hartford	HFD	Maryland	MD	Albuquerque	ABQ

District of Columbia	DC	Baltimore	BWI	Magdalene	MAG
Washington	DCA	Maine	ME	Roswell	ROW
Delaware	DE	Augusta	AUG	Raton	RTN
Dover	0N5	Bangor	BGR	Santa Fe	SAF
Florida	FLG	Caribou	CAR	Nevada	NV
Key West	EYW	Portland	PWM	Austin	AIN
Jacksonville	JAX	Michigan	MIA	Carson City	CXP
Miami	MIA	Kalamazoo	AZO	Ely	ELY
Orlando	ORL	Detroit	DET	Las Vegas	LAS
Pensacola	PNS	Flint	FNT	Wells	LWL
Tallahassee	TLH	Lansing	LAN	Reno	RNO
Tampa	TPA	Rogers City	PZQ	New York	NY
Georgia	GA	Marquette	SAW	Albany	ALB
Albany	ABY	Traverse City	TVC	Buffalo	BUF
Augusta	AGS	Minnesota	MN	New York City	JFK
Atlanta	ATL	Albert Lea	AEL	Lake Placid	LKP
Columbus	CSG	Bemidji	BJI	Syracuse	SYR
Macon	MAC	Duluth	DLH	Ohio	OH
Savanna	SAV	Grand Protage	GPO	Cleveland	CLE
Hawaii	HI	International Falls	INL	Columbus	CMH
Honolulu	HNL	St. Paul	STP	Cincinnati	ISZ
Hilo	ITO	Missouri	MO	Toledo	TOL
Kahului	OGC	Jefferson City	JEF	Youngstown	YNG
Waimea	WAI	Kansas City	MKC	Oklahoma	OK
		Memphis	MPH	Boise City	17K
		Poplar Bluff	POF	Lawton	LAW
		Springfield	SGF	Oklahoma City	OKC
		St. Louis	STL	Tulsa	TUL

Oregon	**OR**	**Utah**	**UT**	**West Virginia**	**WV**
Burns	BNO	Saline	SAL	Charleston	CRW
Eugene	EUG	St. George	SGU	Wheeling	HLG
Medford	MFR	Salt Lake City	SLC	**Wyoming**	**WY**
Portland	PDX	Thompson	TSN	Buffalo	BYG
Salem	SLE	**Virginia**	**VA**	Casper	CPR
Pennsylvania	**PA**	Vienna	DON	Cheyenne	CYS
Harrisburg	CXY	Lynchburg	LYH	Little America	LAA
Philadelphia	PHL	Norfolk	ORF	West Yellowstone	WYE
Pittsburgh	PIT	Richmond	RIC	**Canada**	**CAN**
Scranton	SCR	Roanoke	ROA	Calgary	CAL
Puerto Rico	**PR**	**Vermont**	**VT**	Charlotte Town	CHT
San Juan	SJU	Burlington	BTV	Edmonton	EDM
Rhode Island	**RI**	Montpelier	MPR	Fredericton	FRE
Providence	PVD	**Washington**	**WA**	Halifax	HAL
South Carolina	**SCR**	Aberdeen	ABE	Montreal	MON
Charleston	CHS	Walla Walla	ALW	Ottawa	OTT
Columbia	CUB	Kettle Falls	KTF	Quebec	QUE
Greenville	GMU	Mount Vernon	MVN	Regina	REG
South Dakota	**SD**	Olympia	OLM	Sudbury	SUD
Sioux Falls	FSD	Seattle	SEA	Thunder Bay	THU
Pierre	PIR	Spokane	SFF	Toronto	TOR
Rapid City	RAP	Tonasket	TON	Vancouver	VAN
Tennessee	**TN**	Yakima	YKM	Winnipeg	WIN
Nashville	BNA	**Wisconsin**	**WI**	**Mexico**	**MEX**
Chattanooga	CHA	Wausau	AUW	Chihuahua	CHH
Knoxville	DKX	Green Bay	GRB	Durango	DUR
Memphis	MFR	La Crosse	LSE	Guadalupe	GUA
Texas	**TX**	Madison	MSN	Hermosillo	HER
Abilene	ABI	Milwaukee	MWC	Mexico City	MEC
Amarillo	AMA	Spooner	SSQ		
Austin	AUS				
Brownsville	BRO				
Dallas/Ft. Worth	DFW				
El Paso	ELP				
Houston	HOU				
Laredo	LRD				
Odessa	ODO				
San Antonio	SAT				

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, and (2) this device must accept any interference received, including interference that may cause undesired operation

.
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.