A10-RX
Digital Wireless Receiver

— User Guide —

Copyright / Doc Rev History Info

Model A10-RX.

Date	Description
Dec 2017	Initial Publication
Mar 2018	Edits made in sections: Audio Output and Control, Specifications, and Certifications
July 2018	Revised Firmware Update procedure for A10-RX-SL
Nov 2018	Added v2.50 change (i.e. User Groups)
June 2019	Added v2.70 changes (A10-TX Muted, and Standby Mode displays)
Jan 2020	Updates for v2.80 (green and red LED indications)
Mar 2020	Updates for v2.90 (New RF overload indicator, conform to CSV)
Feb 2021	Updates for v3.00 (Support for A-15PIN accessory)
July 2021	Updates for v4.00 (Support for A20-Mini)
April 2022	Updates for v5.00 (Modulation menu and Q-meter)
June 2022	Updates for v5.10 (Q-meter display options)

Table of Contents

Copyright / Doc Rev History Info 2
Overview 3
- Key Features 3

System Quickstart 4
- At the Receiver 4
- At the Transmitter 4
- At the Receiver 4

Connectors, Controls Description 5
Powering 6
- Channel Powering 6
- Channel Power LEDs 6

Main Display 7
- Two-Channel View 7
- Single-Channel View 7
- Mute Function on the Transmitter 8
- RF Signal Indicator LEDs 8
- RF Overload Indication. 8
- Display Orientation 8

GainForward Input Menu (A20-Mini only). . . 9
- Input Menu (A20-Mini only). 9

Selection Menu 10
- Main Menu 10
- Outputs Sub-Menu 11
- Settings Sub-Menu 11
- Display Sub-Menu 12
- System Sub-Menu 12

Basic Operation 13
- Frequency Selection 13
- Setting Channel, Sub Channel, Frequency 13
- Modulation 13
- Frequency Scanning 13
- Partial Scanning, 25 MHz Increments . . . 14
- Full Scan, 224 MHz 14
- User Group Scan 14
- Audio Output and Control 14
- Analogue Output 14
- AES Digital Output 14
- Antennae 14

User Groups 15
- Sending and Loading User Groups onto A10 Receivers 16
- Loading User Groups on A10-RX 18

Firmware Updates 18
- SD-Utility 18
- Updating A10-RX from Sound Devices Mixer-Recorders 20

Converting Between XLR and SL Mounts. . . 22
A-15PIN Accessory. 23
A-RXMON Accessory 23
Specifications 23
- A10-RX-SL DB-25 Connector Pin Assignments 24

Certifications 25
- Industry Canada Conformity 25
- FCC Conformity 25
- Declaration of Conformity. 25

Warranty 25
Frequency Tables 26
- X Frequencies (6 MHz Per TV Channel) . . 26
- Y Frequencies (7 MHz Per TV Channel) . . 27
- Z Frequencies (8 MHz Per TV Channel) . . 28
- Channel Assignments by Region 28

Overview

- Two-channel, wideband receiver with worldwide tuning range of 470 MHz – 694 MHz.
- Advanced Digital Diversity topology uses two complete RF receivers for each of the two channels, with four RF receivers in total.
- State-of-the-art 100% digital long-range modulation delivers the longest transmission distance of any system on the market.
- Simple menus are quick to access.
- Available in both slot (Uni-/SuperSlot) with the A10-RX-SL or stand-alone cabled version with the A10-RX-XLR.
- Analogue line-level or AES3 digital audio output.
- Compatible with select Sony camera models with A-15PIN. This collaboration between Sony and Sound Devices allows the A10-RX receiver to pass two channel digital audio internally on the Sony camcorder, negating the need for any external cables.

Digital wireless for today and tomorrow.

The A10 Digital Wireless System is designed for the technical demands and requirements of today's RF-hostile, multi-channel productions. The A10-TX and A20-Mini digital transmitter and A10-RX two channel receiver deliver broadcast-quality audio and reliable digital RF performance with an easy, multi-system setup.

The A10's proprietary digital RF topology and Advanced Digital Diversity System is the result of years of research, laboratory experimentation, and customer experience. The result is a wireless link with full 20 kHz audio bandwidth, high dynamic range, ultra-low distortion, an extremely low 2 millisecond end-to-end delay in Standard modulation. The A10 System allows the user to operate up to 20 channels in an 8 MHz TV channel, maximizing spectrum efficiency.

With firmware version 5.00, the A10/A20 Wireless System delivers the longest transmission distance of any system on the market.[1] The state-of-the-art, 100% digital long-range modulation offers the same great audio quality (10 Hz – 20 kHz) as our Standard modulation scheme with a longer range for both line-of-sight and heavy multipath transmission.

The A10-RX two-channel Advanced Dual Diversity receiver is a portable, all-digital wireless receiver for the A10 System. It is designed to work with one or two A10-TX or A20-Mini transmitters. It offers 224 MHz switching bandwidth and precision RF tracking filters in a lightweight, robust package. Two models are available, the A10-RX-SL for slot-in connection and the A10-RX-XLR for stand-alone operation with hardwired power and audio connections.

[1] When comparing systems with same transmit power, same antennas, and same transmission frequency.

System Quickstart

The A10 Digital Wireless System is easy to use. Follow the steps below for basic setup and operation.

At the Receiver

1. Fit the included straight and right-angled antennae to the A10-RX receiver.
2. Connect the receiver to a power source. It will immediately power on.
3. Using the scanning tool in the Selection menu find an available open frequency. If multiple wireless systems are in use, make certain to keep frequencies least 400 kHz apart.
4. Connect the audio output from channel 1, channel 2, or both to an audio input on a mixer, recorder, camera, or PA system.
5. Ensure that the receiver audio output type and level are set based on the input type.

At the Transmitter

1. Attach the straight antenna to the A10-TX or A20-Mini.
2. Attach an audio source to the 3-pin LEMO input connector.
3. Insert batteries into the A10-TX or A20-Mini battery compartment and power on the unit with the red On/Off button.
4. Set the audio input type to set to match the connected input.
5. Set the modulation and transmitting frequency on the A10-TX or A20-Mini (using A20-Remote) to match the modulation and frequency set on the A10-RX receiver channel.
6. With A10-TX adjust the audio gain according to your environment and source, taking care not to overload the signal. This is indicated by a red LED.
   The A20-Mini's GainForward feature eliminates the need to adjust microphone preamplifier gain at the wireless transmitter.

At the Receiver

1. Confirm that the Channel Power LED is solid blue.
2. Confirm that the RF Status LEDs and display indicate good RF strength.
3. For A10-TX, confirm that the audio level at the receiver corresponds to the audio connected to the A10-TX input.
   For A20-Mini, adjust the A10-RX input gain according to your environment and source. When the A10-RX is connected to the 688, 833,888, or Scorpio via the SL-2 or SL-6, A10-RX input gain is bypassed and audio gain is adjusted from mixer-recorder.
4. The system is now ready for use.

Connectors, Controls Description

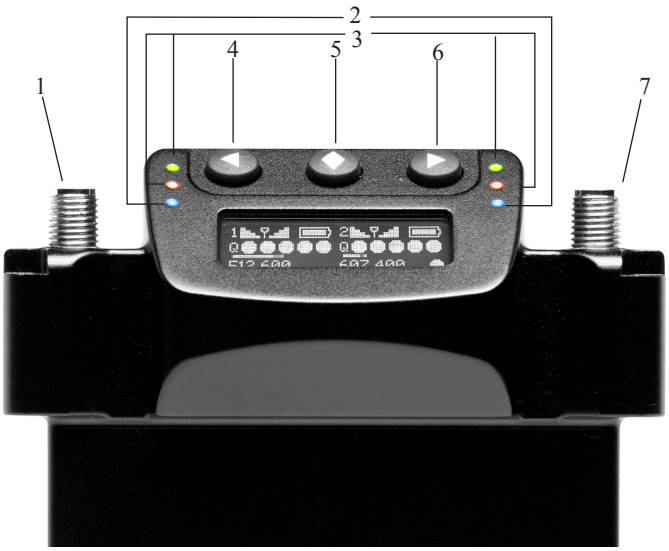


Figure 1: A10-RX

1 -Antenna Socket
SMA connector, 50 ohm, connects to included 1/4-wave whip antenna.

2 -Channel Power LED

- Illuminates blue when the channel's receiver circuitry is powered and operational.
- Blue LED flashes when paired transmitter's battery is critically low or depleted.

3 -Green/Red RF Status LEDs

- Indicates signal strength of received RF.
- Green LED illuminates solid green with good RF reception. It starts to flicker green as the received RF signal quality deteriorates.
- Red LED illuminates solid red when the receiver loses lock to the transmitter signal due to weak signal or transmitter being turned off.
- Both green and red LEDs are off at the fringe of reception.
- Both green and red LEDs flash when RF overload is occurring.

4 -Left Button
Moves the selection in menu to the left, or decrements values.

5 -Menu/Select Button
Enters the menu selection. Also used to select options in the menu.

6 -Right Button
Moves the selection in the menu to the right, or increments values.

7 -Antenna Socket
SMA connector, 50 ohm, connects to included 1/4-wave whip antenna.

8 -Display
OLED screen. The screen can be set to turn off after a period of inactivity from the Selection menu (*Main* > *Settings* > *Screensaver*).

Powering

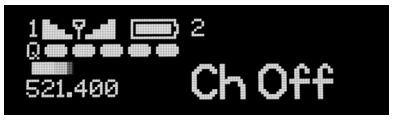
The A10-RX-SL receives power over its D-sub connector. The A10-RX-XLR receives power from its 4-pin Hirose female connector. The male Hirose connector is a power loop through.

When DC power is present, either at the D-sub connector or the Hirose 4-pin, the A10-RX is powered. There are no additional power switches.

Channel Powering

Each of the two channels of the A10-RX can be powered on or off individually. When a channel is powered down that portion of the A10-RX no longer draws power. If the A10-RX is going to be used for a single wireless channel, best practice is to power down the unused channel.

Channel powering is controlled in the Selection Menu (*Main* > *System* > *Power*).



↳ *Shortcut: To power off RX1, simultaneously hold the Left and Centre Menu buttons down for two seconds. To power off RX2, simultaneously hold both Right and Centre Menu buttons down for two seconds. Repeat to turn the individual channels back on. If both RX channels are powered off, the A10-RX will enter standby mode. Press the Centre button to turn both channels of the RX back on simultaneously.*

Channel Power LEDs

The A10-RX has blue Channel Power LEDs for each of its two channels. When first powering the A10-RX without transmitters present, the LEDs illuminate indicating the receiver channel is powered.

The receiver channel will connect, or pair, to an A10-TX or A20-Mini transmitter that is powered on and set to the receiver frequency. The Channel Power LED then shows the battery status of its associated transmitter.

- **Solid Blue** - a solid blue LED indicates that the transmitter battery is in good condition.
- **Flashing Blue** - a flashing blue LED indicates when the transmitter battery level is low or depleted.

When a paired transmitter is powered down, the blue LED continues to show the last condition of the transmitter battery. If the transmitter is powered back on, or a new transmitter is activated on the channel, that transmitter pairs with the receiver and its transmitter battery condition is shown with the blue LED.

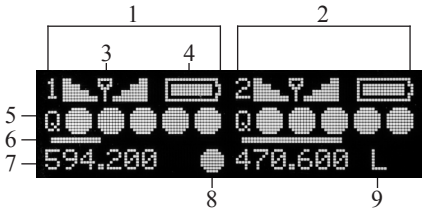
↳ *The LEDs change assignment based on the orientation of the display. Channel 1 is always shown left of the display and channel 2 is always on the right.*

Main Display

When the receiver is first powered on, the main display is in two-channel view.

Two-Channel View

The display shows channel 1 and channel 2 simultaneously. Parameters displayed include the RF signal strength at each antenna, Q-meter, receiver frequency, audio level, and transmitter battery level.



1 -Channel 1 Status
Displays Channel 2 RSSI, Q-meter, audio level, frequency, and transmitter information.

2 -Channel 2 Status
Displays Channel 2 RSSI, Q-meter, audio level, frequency, and transmitter information.

3 -RSSI Meter
Bars indicate RF signal strength at each antenna for the selected frequency.

Note: Even with the transmitter turned off or out of range, bars may still be displayed. This is due to the presence of background RF signal at the selected frequency.

4 -TX Battery Status
Battery icons indicate status of transmitters' batteries.

5 -Q-meter
The Q-meter displays the difference between the signal from the transmitter and any interference using five circles. When a frequency without little to no interference is selected, the Q-meter will display five bars.

6 -Audio Level
Each channel shows a horizontal meter for audio levels.

7 -Frequency/TV Channel
Displays the receiver frequency. Region, channel, and sub channel are displayed when the Display Options menu is set to TV Ch.

X, Y, and Z regions are selected by the TV Channel Map setting. An asterisk next to the sub channel indicates that the set frequency is not directly on a preassigned sub channel.

The User Name is displayed when User Groups are active. See User Groups.

8 -Transmitter Record Status
The Record indicator is displayed when the tuned transmitter is recording.

9 -Transmitter Limiter/Overload/Mute
Displays the Limiter, Overload, or Mute status of the tuned transmitter. L = Limiter, ! = Overload, M = Mute.

Single-Channel View

Pressing the Left or Right buttons when in two-channel view changes the display to a single-channel view of channel 1 or 2, respectively.

In addition to the parameters shown in two-channel view, the single channel screens display the analogue output level or AES and the transmitter name.

When the channel is paired with an A10-TX, pressing the Left or Right button again shows the A10-TX metadata.

When the channel is paired with an A20-Mini, pressing the Left or Right button enters the A10-RX Input menu. The Input Menu is not available when the A10-RX is connected to the 688, 833, 888, or Scorpio via the SL-2 or SL-6. With this setup the A20-Mini metadata screen is displayed. See GainForward Input Menu for more details.

Mute Function on the Transmitter

When the A10-TX or A20-Mini audio is muted from the transmitter, the A10-RX displays ‘M’ in the dual channel screen and ‘Mute’ in the single channel screen.

RF Signal Indicator LEDs

The RF Signal LEDs offer an at-a-glance indication of RF performance. The LEDs to the left of the display indicate channel 1 activity, while the LEDs to the right indicate channel 2 activity. Each channel has one green LED and one red LED.

- **Green LED only** - illuminates solid green with good RF reception. It starts to flicker green as the received RF signal quality deteriorates.
- **Red LED only** - received RF signal quality is deteriorating.
- Both green and red LEDs flash when RF signal is overloading/too strong.
- Both green and red LEDs are OFF at the fringe of reception.

↳ *The LEDs change assignment based on the orientation of the display set in Menu > Settings > Display > Orientation. Channel 1 is always shown left of the display and channel 2 is always on the right.*

The LEDs can be turned off in *Menu > Settings > LEDs*.

RF Overload Indication.

When RF signal is overloaded, the A10-RX’s green and red LED flash. If you see this indication the RF signal is too strong. Correct the situation by reducing RF power on the transmitter, increasing the distance between transmitter and receiver, or applying attenuation to the antenna system in use.

Display Orientation

The A10-RX Menu screen operates with its Menu buttons either below or above the display. This is controlled in *Menu > Settings > Display > Orientation*.

Q-meter vs Audio Meter Display Size

The A10-RX displays a large Q-meter by default. The Q-meter can displayed smaller making room for a larger Audio meter. Set your preferred size in *Menu > Settings > Display > Q-Meter*.

GainForward Input Menu (A20-Mini only)

The A10-RX supports the A20-Mini's GainForward feature. GainForward eliminates the need to adjust microphone preamplifier gain at the wireless transmitter. Audio levels from the transmitter are controlled either directly at the mixer's trim control or at the wireless receiver. If the talent speaks too softly or emotes too loudly after being "wired" with the transmitter, simply adjust the transmitter gain with the mixer's gain trim. Read more about GainForward at: https://www.sounddevices.com/gainforward-explained/

From the A10-RX home screen, press the channel's arrow button twice to enter the Input menu. From the Input menu, press the middle button to select a sub-menu to adjust gain, low cut, or limiter of the incoming A20-Mini transmitted signal.

When the A10-RX receiving A20-Mini signal is slotted into the SL-2 or SL-6, the A10-RX Input menu settings are bypassed and hidden. All gain, low cut, and limiter activity are performed and controlled by the 688, 833, 888, or Scorpio. See the Mixer-Recorder User Guides for more information.

The A10-TX does not support GainForward. The Input menu is not available on channels paired with an A10-TX.

Input Menu (A20-Mini only)

Selections	Icon	Description	Options
Exit		Returns to the single-channel view.	
Gain		Sets the gain of the incoming A20-Mini signal.	• 0 to 60 dB
Low Cut		Sets the Low Cut Filter frequency for the incoming A20-Mini signal.	• Off • 40 Hz • 60 Hz • 80 Hz • 100 Hz • 200 Hz
Limiter		Sets the Limiter of the incoming A20-Mini signal.	• On • Off
Information		Displays the paired A20-Mini's name and the A10-RX's Input Gain and Low Cut values.	

Selection Menu

The A10-RX receiver is controlled through its main Selection menu. Enter the menu by first selecting either the channel 1 receiver (Left button) or channel 2 receiver (Right button), then press the Centre Menu button. Once in the menu, the Left and Right buttons toggle among options, and the Menu button makes the selection.

Main Menu

Selections	Icon	Description	Channel or Global	Options
Exit		Returns to the main display screen.		
Frequency		Sets the transmitter's frequency. Frequency selection and channel increments change based on the region of operation to which the unit is set.	Channel	• TV Channel Increments • Sub Channel Increments • Tune: Frequency Increments in 25 kHz steps
Outputs		Enters the Outputs sub menu.		• Maximum Level • Audio Polarity • Mode • Test Tone
Scan		Enters the scan function. Scanner indicates the RF activity. Scans can either be in 25 MHz increments or across the full range of the receiver.	Global	• 1-10 - scans subsections of the tuning range • Full - scans entire tuning range of system
Privacy		When active the transmitter sends its signal encoded with a four-digit privacy key set at the transmitter. The same four digit key needs to be set on a receiver to receiver to receive the signal.	Channel	• On - enter key • Off - encryption cleared, set to 0000 to deactivate
Settings		Enters additional settings sub menu.		• Modulation • User Groups • TV Channel Map • Display • LEDs
System		Enters additional settings sub menu		• Power • Restore • Info

Outputs Sub-Menu

Selections	Icon	Description	Channel or Global	Options
Exit		Returns to the main menu		
Max Level		Selects the maximum analogue output level. Output level based on a 0 dBFS signal sent from an A10-TX transmitter.	Channel	• +14 dBu • +2 dBu • -10 dBu • -22 dBu
Audio Polarity		Selects the polarity of the balanced output signal.	Channel	• Normal • Inverted
Mode		Chooses the audio output type of the A10-RX. When the A10-RX is set to AES the channel 2 XLR connection is not used.	Global	• Analogue • AES
Test Tone		Activates a 1 kHz tone oscillator sent directly to the outputs. tone ↳ *This disrupts the output from a linked A10-TX transmitter.*	Channel	• -18 dBFS

Settings Sub-Menu

↳ *All setting are Global.*

Selections	Icon	Description	Options
Exit		Returns to the main menu	
Modulation		Selects Standard or Long Range Modulation. ↳ *The Modulation setting must match between the A20-Mini or A10-TX and the A10-RX in order for the transmitted signal to be received.*	• Std (Standard) • LR (Long Range)
User Groups		Sets whether receiver utilizes user groups (User) or manual frequency selection (Factory).	• User • Factory
TV Ch Map		Selects the TV channel spacing in MHz to ensure channel selection corresponds to a specific geographic region. See frequency chart.	• **X** – 6 MHz • **Y** – 7 MHz • **Z** – 8 MHz
Display		Enters Display sub-menu.	• Brightness • Screensaver • Orientation • Options • Q-meter
LEDs		When set to On the LEDs remain illuminated. Off deactivates the LEDs.	• On • Off

Display Sub-Menu

All settings are Global.

Selections	Icon	Description	Options
Exit		Returns the main menu	
Screen Brightness		Sets the brightness of the OLED screen.	Five increments, 1–5, 5 is brightest
Screensaver		Sets the duration, in seconds, how long the screen remains on after a button press. Off keeps the screen on continuously with no screensaver.	• Off - display remains on when unit is powered • 5 sec • 30 sec • 120 sec
Orientation		Sets the operating orientation of the menu screen and LEDs. The A10-RX can be used in an orientation with the buttons below the screen (normal), or with the buttons to the top (flipped).	• Normal • Flipped
Options		Sets whether Frequency or TV Channel is displayed on the dual channel screen.	• Frequency • TV Ch
Q-meter		Sets the Q-meter display size. The audio meter is displayed larger when Q-meter is small.	• Large • Small

System Sub-Menu

All settings are Global.

Selections	Icon	Description	Options
Exit		Returns the main menu	
Power		Turns power to the RF receiver for each of the two channels on and off.	• **1** - channel 1 only • **1 and 2** - both channel 1 and 2 • **2** - channel 2 only • **Off** - receiver circuits off
Restore		The restore function allows the user to reset the A10-RX to the factory default settings. *Restore sets the TV Channel Map to region Z. Select the current region in your locality before proceeding.*	
Info		Shows numerous attributes of the transmitter.	• Serial Number • Firmware Revision • Frequency Band

Basic Operation

Frequency Selection

The A10 Digital Wireless System operates in the UHF frequency band from 470 to 694 MHz. The A10-RX can tune across the entire range of the system.

Because the A10 digital RF transmission is inherently immune to intermodulation multiple A10 Digital Wireless systems can be used simultaneously on nearby adjacent frequencies without worry of intermodulation interference. Systems can be used together when separated by at least 400 kHz.

Setting Channel, Sub Channel, Frequency

To simplify frequency selection, frequencies are divided into channels and sub channels. The specific frequencies corresponding to channels and sub channels depends on the setting of the TV Channel Mapping (*Main > Settings > TV Ch Map*). Three options are available, 6, 7, and 8 MHz spacing, X, Y, and Z respectively. These three settings generally correspond to three main geographic regions, the Americas, Australia/New Zealand, and Europe, respectively. For more information, see Frequency Tables.

- **Channel** - corresponds to broadcast television channels used in a geographic region. Depending on the selected channel mapping, channels cover 6, 7, or 8 MHz.
- **Sub Channel** - channels are divided in 400 kHz increments called sub channels to speed up frequency selection. The number of sub channels depends on the channel mapping selected.
- **Frequency** - specific frequencies within the receivers tuning range can be selected in 25 kHz increments. When a selected frequency does not correspond with a channel/sub channel mapping, an asterisk character (*) is shown in the display adjacent to channel/sub channel assignment below the frequency shown.

To change TV channels:

1. Use the Left button to highlight the TV Channel.
2. Press the Centre Menu to select the TV channel.
3. Select the sub channel until the desired sub-channel is selected.

↳ *Remember, for a given channel / sub channel, the actual frequency will change depending on the TV Channel Mapping setting.*

See the Frequency Tables in this guide for a complete list of frequencies corresponding to the channel and sub channel selections.

Modulation

Modulation can be set to Standard (Std) or Long Range (LR) in *Menu > Settings > Modulation.* When compared to Standard Modulation, Long Range Modulation has better sensitivity. This increased sensitivity results in more robust performance in challenging RF environments.

↳ *The Modulation setting must match between the A20-Mini or A10-TX and the A10-RX in order for the transmitted signal to be received.*

Frequency Scanning

The frequency scanning tool uses the radios in the A10-RX to measure and display RF activity within the system's tuning range. This allows a user to find frequencies with low RF activity suitable for system operation. The scan tool operates over the full 224 MHz bandwidth of the receiver. Enter the scanner from the Selection Menu *Main > Scan*.

↳ *Audio from channel 1 and channel 2 is muted when the scan tool is active.*

To initiate a scan, press the >> button. The scan will start, working from lower frequencies to higher frequencies. The cursor can be seen to move along the screen denoting the current position of the scan. The scan can be stopped by pressing the Left button.

Selecting the > button allows the user to manually step through in 400 kHz steps at a time. Selecting the << button allows the user to automatically scan backwards, and similarly selecting the < button allows the user to manually step lower in frequency in 400 kHz steps.

Partial Scanning, 25 MHz Increments

In partial scanning mode the receiver scans a 25 MHz range. This partial scan improves the resolution of the scan over a full scan. The ten partial scans cover the following ranges:

1 - 470-495 MHz
2 - 492-517 MHz
3 - 515-540 MHz
4 - 537-562 MHz
5 - 559-584 MHz
6 - 581-606 MHz
7 - 603-628 MHz
8 - 626-651 MHz
9 - 648-673 MHz
10 - 669-694 MHz

Full Scan, 224 MHz

The full receiver bandwidth of 224 MHz can also be scanned.

User Group Scan

When user groups are in use, an additional option called UG is available in the Scan menu. Selecting this will only scan frequencies in the loaded user group.

Audio Output and Control

The A10-RX outputs either analogue line level or AES3 digital audio. This global setting applies to both channel outputs.

Analogue Output

When set to analogue in the Selection Menu the A10-RX outputs low-impedance, balanced line level audio. It is designed to connect to balanced or unbalanced line level inputs. To un-balance the output, float pin-3.

AES Digital Output

When set to AES output in the Selection Menu the A10-RX outputs two-channel AES3 at 24-bit, 44.1 kHz. Channel 1 output appears at AES left, channel 2 appears at AES right.

With the A10-RX-XLR the channel 1 XLR connector is used for AES3 output. The channel 2 XLR connector is not active when set to AES output.

Antennae

The SMA antenna connector is used to mount the included 1/4-wave whip antenna. For specialty applications external, high-gain receiving antennae can be attached to the SMA connector.

↳ *Ensure that the antennae used are built for the correct frequency.*

For best operation and reception power with the included 1/4-wave antenna, keep it in the free field, away from metal objects or transmitting devices.

User Groups

The User Groups feature allows for easy, intuitive naming of specific frequencies for each A10 transmitter used on set, and grouped together for faster tuning. The operator of an A10 receiver may then easily switch between transmitters by choosing alphanumeric names, such as “Jack” and “Jill”, instead of having to remember and manually tune to different, specific numerical frequencies.

For instance, a producer or director may want to monitor several different actors’ wireless transmitters. Rather than having to keep a list of all of their frequencies, each transmitter may be pre-assigned a frequency and given an actor’s name. Then only those pre-assigned frequencies that have been named will be available as possible options for tuning.

User Group files are created using SD-Utility—a Windows and Mac application available for free download from the Sound Devices website.
https://www.sounddevices.com/download/?prod=sd-utility

Once created, the User Group files are uploaded to A10 transmitters and receivers.

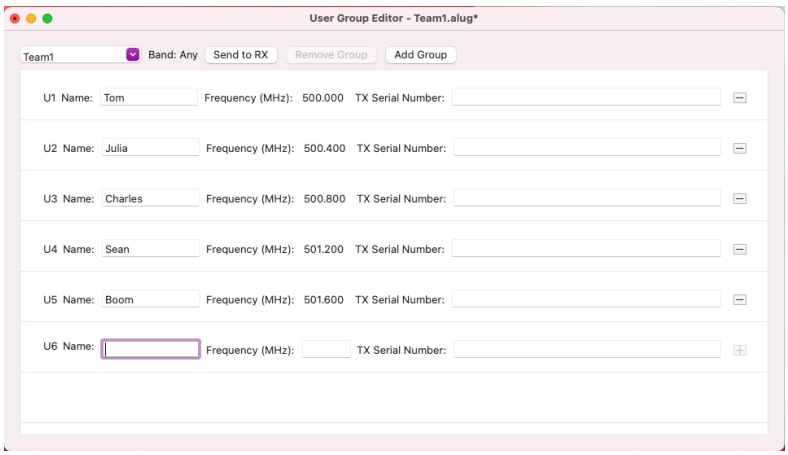
↳ *A20-Mini does not support User Groups.*

To create a new user group:

1. Open SD-Utility on your computer.
2. Do one of the following:
   - On a Mac, select User Group File > New.
   - On a PC, select File > User Groups > Create a new file.
3. Name the new group.
4. Select a range of frequencies via the Band drop-down list. Options include A, B, C, D and Any. This will automatically restrict users in the group to the frequencies within that band. Selecting Any will make frequencies within all bands available for assignment to users in the group.

   ↳ *All A10-TX will have the available bands listed on the printed label inside the battery compartment door as well as displaying the frequencies capable of being generated by the transmitter in Menu > System > Info.*
5. Select OK. The User Group Editor screen appears with fields for the first user (U1) available.
6. Enter a Name and Frequency for U1 in the fields provided. The A10-TX transmitter’s serial number is optional.

   Entry of ineligible frequencies (or characters) will cause the text in the field to appear red. SD-Utility automatically fills in .000 as the subchannel variable for frequencies entered as a whole number. SD-Utility automatically follows the best-practice method of spacing adjacent transmitters by at least one subchannel, preventing possible interference from other transmitters.
7. Click Add (on a PC) —or the Plus (+) button on a Mac— to add the user to the group. This also adds a new line for the next user (U2, U3, etc). Each user in a group can be given a name and frequency, which after upload, will then be displayed on A10 receivers and transmitters. Each group can have up to 32 users.



SD-Utility supports the creation of up to eight user groups, each with a max of 32 users, per Audio Limited User Group (ALUG) file.

To add additional user groups:

1. In SD-Utility, select Add Group.
2. Name the new group and select the band of frequencies for the group.
3. Add users (defining name and frequencies) to the group.

Audio Limited User Group files (ALUG) may be saved for future use and modification. When saving the ALUG file, SD-Utility will default the file name to the first User Group name in the drop-down list.

To load an ALUG file into SD-Utility:

1. In SD-Utility, select User Group File > Open.
2. Choose an ALUG file on your computer.

To remove a user group:

1. In SD-Utility, select a User Group in the drop-down list.
2. Select Remove Group.

Sending and Loading User Groups onto A10 Receivers

While each ALUG file may contain up to eight user groups, only one group at a time may be sent to and loaded on an A10 receiver. A user group is sent to the A10-RX-XLR by directly connecting it to a computer via USB. Sending a user group to the A10-RX-SL is achieved via the A10-RACK or the Sound Devices 688 or 8-Series Mixer-Recorders with attached SL-2 or SL-6.

↳ *For instructions on sending user groups to A10 transmitters, see the A10-TX User Guide or the A10-TX-US User Guide.*

To send a user group to an A10-RX via A-XLR, A-RXMON, or A-15PIN::

1. Start the SD-Utility application.
2. Connect the A10-RX via USB to the computer.
   The A-XLR and A-RXMON connect via microUSB.
   The A-15PIN connects via USB-C.
   Note: A USB 3.0 port is required to power the A10-RX via the A-15PIN. If a USB 3.0 port is not available, connect two USB 2.0 ports to the A-15PIN using the Sound Devices MX-USB Y USB-C to two USB-A Y-Cable. The A10-RX must be running firmware v3.00 or higher, in order to connect to SD-Utility.

3. Load the ALUG file into SD-Utility.
4. Select Send to RX. SD-Utility detects and displays the connected receiver.
5. Select the Send check box and click Send.

To send a user group to A10-RX-SL receivers via A10-RACK:

1. Start the SD-Utility application.
2. Connect the A10-RACK to the computer's USB port.
3. Load the ALUG file into SD-Utility.
4. Select Send to RX. SD-Utility will detect and display all A10-RX receivers installed in the A10-RACK.
5. Select the check boxes next to each receiver to which you want to send the User Group.
6. Click Send.

To send a user group to A10-RX-SL receivers via 688/SL-6:

1. Using an SD card already formatted in a 688, save the ALUG file to a formatted SD card.
2. Insert the SD card into the 688.
3. With the A10-RX-SL receiver(s) in the SL-6 slots, power on the 688/SL-6.
4. Access the Receiver Overview screen by doing either of the following:
   - HP + METERS: Press and hold the Headphone encoder, then press the METERS button.
   - Press MENU, then use the Headphone encoder to select SL-6 > Receiver Overview.
5. Select a channel.
6. Slide RTN/FAV switch right to select Menu.
7. Select User Groups > User > Load New.
8. Select a user group from the ALUG file.

To send a user group to A10-RX-SL receivers via Scorpio with SL-6 or 8-Series with SL-2:

1. Using an SD card already formatted in an 8-Series Mixer-Recorder, save the ALUG file to a formatted SD card.
2. Insert the SD card into the 8-Series Mixer-Recorder.
3. With the A10-RX-SL receiver(s) in the SL-2 or SL-6 slots, power on the 8-Series Mixer-Recorder.
4. Access the Receiver Overview screen by doing either of the following:
   - METERS + HP: Press and hold the METERS button, then press the Headphone encoder.
   - Press MENU, then use the Select encoder to select SuperSlot>SL-2/SL-6 Receiver Overview.
5. Select a channel.
6. Slide RTN/FAV switch right to select Options.
7. Select User Groups > User > Load New.
8. Select a user group from the ALUG file.

Loading User Groups on A10-RX

While the SD card can have multiple ALUG files, each with up to eight groups, only one user group at a time may be loaded to a receiver.

A10-RX receivers can operate in one of two modes: User and Factory. In Factory mode, frequencies are manually dialed in, but in User mode (when a user group is loaded), pre-set frequencies are dialed in by user name.

To set the receiver to User mode:

1. Press the Centre Menu button on the receiver.
2. Select Settings > User Groups > User.

To dial in a specific User Group frequency:

1. Press the Centre Menu button on the receiver.
2. Select Frequency.
3. Press the Left or Right button to select one of the user names. The frequency will appear along with the name.

While in User mode, no non-user group frequencies will be selectable. To revert back to manual frequency selection, set mode to Factory (Menu > Settings > User Groups > Factory.)

Firmware Updates

Periodically Audio Ltd. issues new firmware for the A10-RX receiver. Make certain to register your product at the Sound Devices website to receive firmware update notifications. Firmware is installed on the A10-RX via SD-Utility or via select Sound Devices Mixer-Recorders. Download the latest firmware PRG from the Sound Devices website at:
https://www.sounddevices.com/download/

A Change List of new features for the latest firmware can also be found on this webpage.

SD-Utility

The Sound Devices SD-Utility software utility includes a receiver firmware update tool. SD-Utility is available as a free download for MacOS 10.11+ or Windows 10+ computers. Download the latest version of SD-Utility from the Sound Devices website at:
https://www.sounddevices.com/download/?prod=sd-utility

MacOS users will also need to download and install the CP210x USB to UART Bridge VCP Drivers from the Silicon Labs website at:
https://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers

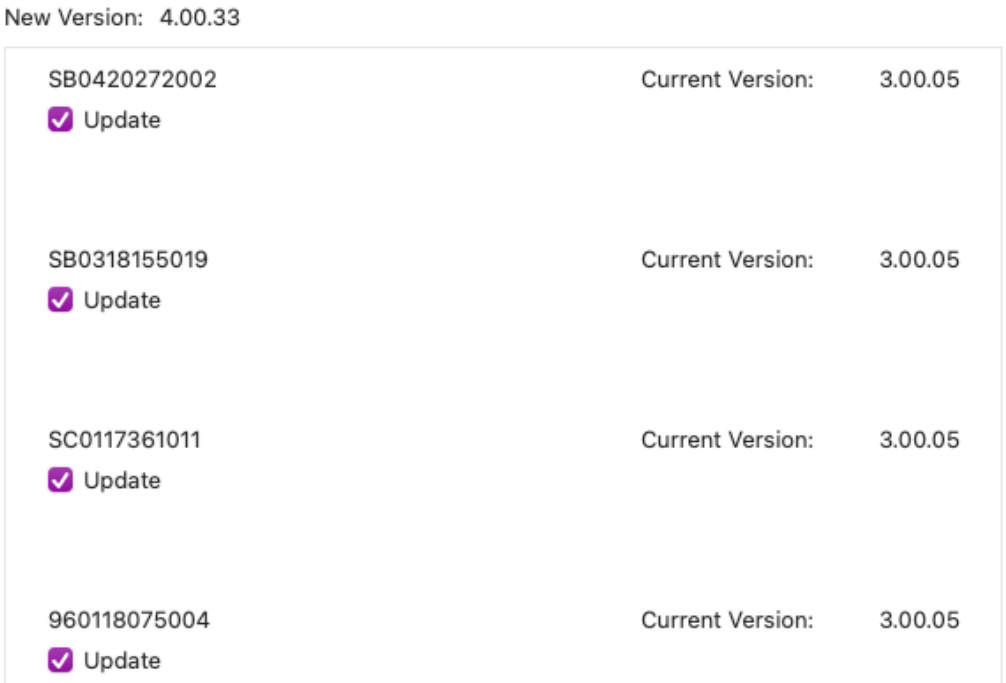
A10-RX connects to SD-Utility via the A-XLR, A-RXMON, A-15PIN, or A10-RACK.

To update A10-RX firmware via A-XLR, A-RXMON, or A-15PIN:

1. Download new firmware PRG file from the Sound Devices website.
2. Launch the SD-Utility application.
3. Connect the A10-RX via USB to the computer.
   The A-XLR and A-RXMON connect via microUSB.
   The A-15PIN connects via USB-C.
   Note: A USB 3.0 port is required to power the A10-RX via the A-15PIN. If a USB 3.0 port is not available, connect two USB 2.0 ports to the A-15PIN using the Sound Devices MX-USB Y USB-C to two USB-A Y-Cable. The A10-RX must be running firmware v3.00 or higher, in order to connect to SD-Utility.
4. Connect a power source to the A-RXMON or A-XLR. The A-15PIN does not require additional power.
5. Power on the A10-RX.
6. From SD-Utility, select File > Update RX and then select the firmware PRG file to install.
7. Follow the on-screen prompts.

To update A10-RX firmware via A10-RACK:

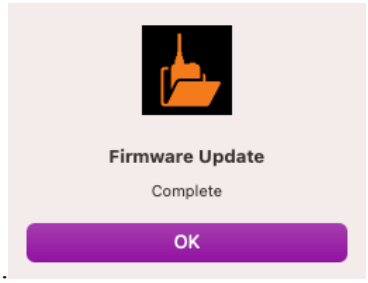
1. Download new firmware PRG file from the Sound Devices website.
2. Launch the SD-Utility application.
3. Connect the A10-RACK back panel USB-B port to the computer's USB-A port using a standard USB-A to -B cable.
3. Ensure all A10-RX receivers are properly slotted into the A10-RACK. Power on the A10-RACK and A10-RX-SL receivers.
4. From SD-Utility, select File > Update RX and then select the firmware PRG file to install.
5. After a momentary refresh, SD-Utility will detect all A10-RX-SL receivers in the A10 RACK. SD-Utility will display the A10 Receivers listed in order and display the Serial Number and current Firmware Version.



6. SD-Utility detects A10 Receivers running older versions of Firmware and automatically selects them to be updated. Otherwise, select the Update check box for each RX you want to update, and then click Update.
7. Click OK to confirm, if prompted. A status bar will indicate the progress of each A10 Receiver update.

↳ *Receivers are updated one at a time. As the receiver is updated, its screen will display Programming and the LEDs will turn off. This is normal operation. After the update, the receiver's menu will be available again.*

An Update Complete popup appears after all receivers have been updated



8. Click OK when Firmware Update is complete.

Updating A10-RX from Sound Devices Mixer-Recorders

Updating the firmware on the A10-RX-SL may be done via the Sound Devices 688 or 8-Series Mixer-Recorders, while the receiver is slotted into the SL-2 or SL-6.

To update firmware on an A10-RX-SL via the 688 and SL-6:

1. Download new firmware PRG file from the Sound Devices website and copy it to an SD card.
2. Power on the 688 and SL-6
3. Insert the SD card into the slot on the side of the 688.
4. METERS + HP: Press the METERS button, then push in the Headphone encoder to access Receiver Overview screen.
5. Turn and press the Headphone encoder to select a receiver. This accesses the Receiver Details screen.

↳ *You need only select either channel per receiver to perform the update for the entire receiver.*

6. Slide RTN/FAV switch to select Menu.
7. Use Headphone encoder to select Update Firmware. The 688 will prompt you to confirm a search of inserted CF/SD cards for a programming file (PRG). Select OK to continue.
8. After it finds a file, the 688 will prompt you to confirm it has found the correct file. If it is, select OK to continue.

↳ *As the receiver is updated, its screen will display Programming and the LEDs will turn off. This is normal operation.*

9. Repeat steps for each receiver in the SL-6.

To update A10-RX-SL firmware via the Scorpio and SL-6 or the 8-Series and SL-2:

1. Download new firmware PRG file from the Sound Devices website and copy it to an SD card.
2. Power on the 8-Series.
3. Insert the SD card into the slot on the side of the 8-Series.
4. METERS + HP: Press the METERS button, then push in the Headphone encoder to access Receiver Overview screen.
5. Turn and press the Select encoder to select a receiver. This accesses the Receiver Details screen.

   ↳ *You need only select either channel per receiver to perform the update for the entire receiver*

6. Slide RTN/FAV switch to select Options.
7. Use either encoder to select Update Firmware. After it finds a file, the 8-Series prompts you to confirm it has found the correct file. If it is, select OK to continue.

   ↳ *As the receiver is updated, its screen will display Programming and the LEDs will turn off. This is normal operation.*

8. Repeat steps for each receiver in the SL-2 or SL-6.

Converting Between XLR and SL Mounts

The A10-RX receiver is modular in design. With the correct accessories—either the A-SL or the A-XLR adapters—the A10-RX-SL slot receiver and A10-RX-XLR cabled receiver can be converted between each type.

- The A-SL accessory is a 25-Pin D-Type Uni/Superslot adapter, and comes with the A-PLATE spacer.
- The A-XLR accessory is an XLR and power cable adapter.

To convert from an A10-RX-SL to an A10-RX-XLR:

1. Remove the four perimeter screws. Do not remove the two screws on either side of the 25-pin D-Type connector.

2. Remove the A-SL accessory.

3. Position the A-XLR accordingly, and replace screws.

Complete the above procedure in reverse to convert from A10-RX-XLR to A10-RX-SL.

A-15PIN Accessory

A10-RX supports the Sound Devices A-15PIN adapter for Sony's proprietary wireless slot. The A-15PIN connects an A10-RX directly to Sony camcorders/extension units and sends two channels of AES digital wireless audio. When connected to the camcorder via the A-15PIN, the A10-RX receives power and powers up and down with the camcorder.

Installation instructions for the A-15PIN and a list of supported Sony cameras can be found here:
https://www.sounddevices.com/a-15pin-installation/

A-RXMON Accessory

Monitor any A10 transmitter on set with this handy belt-worn headphone amp for your A10-RX. The A-RXMON provides a simple, portable solution for easily monitoring two A10-TX audio channels with headphones.

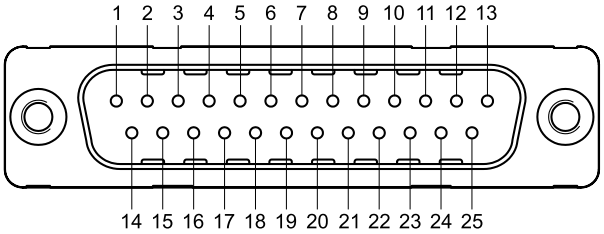
See the A-RXMON User Guide for more details.

Specifications

Frequency Range	World Models: A10-RX-SL (470–694 MHz), A10-RX-XLR (470–694 MHz). U.S. Only Models: A10-RX-SL-US (470–608 MHz), A10-RX-XLR-US (470–608 MHz). Transmitters are tunable in 25 kHz steps.
Modulation Mode	Proprietary digital RF modulation Standard or Long Range, selectable
Latency	Standard modulation = 2 ms, Long Range modulation 3.9 ms, measured at analogue output.
Digital Audio Codec	Audio Ltd. proprietary, high-performance digital encoding algorithm
Audio Frequency Response	20 Hz–20 kHz
Maximum Output Level	+14 dBu, +2 dBu, -10 dBu, or -22 dBu, menu-selectable, with a 0 dBFS signal at the transmitter input, 130 ohms impedance
Digital Audio Output	AES3 balanced connection, 110 ohms, left=channel 1, right=channel 2
Menu and Controls	OLED menu display, 3 button navigation
Privacy	User settable 4-digit PIN, Audio Ltd. proprietary
Powering	6–18 VDC, approx. 3 W with one receiver active, approx. 4.4 W with two receivers active
Operating Temperature Range	-10 °C to +55 °C
Weight and Dimensions	207 g, 124 x 68 x 18 mm

A10-RX-SL DB-25 Connector Pin Assignments

The illustration below shows the pin assignments of the A10-RX-SL when viewing the bottom connector.



DB-25 Pin	Name	Description
1	Ground	Ground connection
2	Ch 1+ analogue / Ch 1,2 AES +	Ch 1 + analogue audio out, +2 dBu level (+/- 0.5 dB), balanced. Alternately, Ch1 and Ch 2 AES3+ (balanced, 110 ohm, transformerless).
3	Ch 1 - analogue / Ch 1,2 AES -	Ch 1 - analogue audio out, +2 dBu level (+/- 0.5 dB), balanced. Alternately, Ch 1 and Ch 2 AES3- (balanced, 110 ohm, transformerless).
4	Ground	Ground for power
5	6-18 VDC	Power supply, 6.0-18.0 V, 6 W max.
6	no connection	
7	no connection	
8	no connection	
9	no connection	
10	no connection	
11	no connection	
12	no connection	
13	Ground	Ground connection
14	Ground	Ground connection
15	Ch 2+ analogue	Ch 2 + analogue audio out, +2 dBu level (+/- 0.5 dB), balanced.
16	Ch 2- analogue	Ch 2 - analogue audio out, +2 dBu level (+/- 0.5 dB), balanced.
17	no connection	
18	no connection	
19	no connection	
20	no connection	
21	no connection	
22	UART transmit (0/3.3V)	UART from A10-RX. 0/3.3V signaling.
23	UART receive (0/3.3V)	UART to A10-RX. 0/3.3 V signaling.
24	no connection	
25	Ground	Ground connection

Certifications

Industry Canada Conformity

This radio transmitter has been approved by Industry Canada to operate with the supplied monopole whip antenna only. Other antenna types are strictly prohibited for use with this device.

This device operates on a no-protection no-interference basis. Should the user seek to obtain protection from other radio services operating in the same TV bands, a radio license is required. Please consult Industry Canada's document CPC-2-1-28, 'Optional Licencing for Low-Power Radio Apparatus in the TV Bands', for details.

EN: This device complies with Industry Canada's license exempt RSSs. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

FR :Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC Conformity

The A10-RX receiver complies with the following requirements:

FCC (Federal Communications Commission) Part 15

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.

Declaration of Conformity

The Declaration of Conformity documentation is provide online at:
https://www.sounddevices.com/audio-ltd-doc/

Warranty

Audio Ltd warrants the items listed above against defects in materials and workmanship for a period of two (2) years from date of original retail purchase. Products must be purchased through authorized Audio Ltd resellers to qualify for Warranty coverage. Damage resulting from the opening of an Audio Ltd product or attempted repairs by non-authorized personnel will void warranty coverage.

This is a non-transferable warranty that extends only to the original purchaser. Audio Ltd will repair or replace the product at its discretion at no charge. Warranty claims due to severe service conditions will be addressed on an individual basis.

This warranty does not apply to defects caused by misuse, abuse or altered goods. There are no express or implied warranties which extend beyond the warranty made here. All warranty submissions must include an unaltered copy of the original sales receipt from an authorized Audio Ltd reseller.

For additional information about warranty-related claims, contact support.

Frequency Tables

The A10-TX offers preselected frequencies based on channels and sub channels. Three sets of frequencies are available based on either 6, 7, or 8 MHz channel bandwidth. Select the channel bandwidth based on the geographic region where the unit is operating.

X Frequencies (6 MHz Per TV Channel)

The chart below shows all frequencies available for the A10 wireless system. Not all channels are available on all transmitters.

		Sub Channel														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Channel	14	470.2	470.6	471	471.4	471.8	472.2	472.6	473	473.4	473.8	474.2	474.6	475	475.4	475.8
	15	476.2	476.6	477	477.4	477.8	478.2	478.6	479	479.4	479.8	480.2	480.6	481	481.4	481.8
	16	482.2	482.6	483	483.4	483.8	484.2	484.6	485	485.4	485.8	486.2	486.6	487	487.4	487.8
	17	488.2	488.6	489	489.4	489.8	490.2	490.6	491	491.4	491.8	492.2	492.6	493	493.4	493.8
	18	494.2	494.6	495	495.4	495.8	496.2	496.6	497	497.4	497.8	498.2	498.6	499	499.4	499.8
	19	500.2	500.6	501	501.4	501.8	502.2	502.6	503	503.4	503.8	504.2	504.6	505	505.4	505.8
	20	506.2	506.6	507	507.4	507.8	508.2	508.6	509	509.4	509.8	510.2	510.6	511	511.4	511.8
	21	512.2	512.6	513	513.4	513.8	514.2	514.6	515	515.4	515.8	516.2	516.6	517	517.4	517.8
	22	518.2	518.6	519	519.4	519.8	520.2	520.6	521	521.4	521.8	522.2	522.6	523	523.4	523.8
	23	524.2	524.6	525	525.4	525.8	526.2	526.6	527	527.4	527.8	528.2	528.6	529	529.4	529.8
	24	530.2	530.6	531	531.4	531.8	532.2	532.6	533	533.4	533.8	534.2	534.6	535	535.4	535.8
	25	536.2	536.6	537	537.4	537.8	538.2	538.6	539	539.4	539.8	540.2	540.6	541	541.4	541.8
	26	542.2	542.6	543	543.4	543.8	544.2	544.6	545	545.4	545.8	546.2	546.6	547	547.4	547.8
	27	548.2	548.6	549	549.4	549.8	550.2	550.6	551	551.4	551.8	552.2	552.6	553	553.4	553.8
	28	554.2	554.6	555	555.4	555.8	556.2	556.6	557	557.4	557.8	558.2	558.6	559	559.4	559.8
	29	560.2	560.6	561	561.4	561.8	562.2	562.6	563	563.4	563.8	564.2	564.6	565	565.4	565.8
	30	566.2	566.6	567	567.4	567.8	568.2	568.6	569	569.4	569.8	570.2	570.6	571	571.4	571.8
	31	572.2	572.6	573	573.4	573.8	574.2	574.6	575	575.4	575.8	576.2	576.6	577	577.4	577.8
	32	578.2	578.6	579	579.4	579.8	580.2	580.6	581	581.4	581.8	582.2	582.6	583	583.4	583.8
	33	584.2	584.6	585	585.4	585.8	586.2	586.6	587	587.4	587.8	588.2	588.6	589	589.4	589.8
	34	590.2	590.6	591	591.4	591.8	592.2	592.6	593	593.4	593.8	594.2	594.6	595	595.4	595.8
	35	596.2	596.6	597	597.4	597.8	598.2	598.6	599	599.4	599.8	600.2	600.6	601	601.4	601.8
	36	602.2	602.6	603	603.4	603.8	604.2	604.6	605	605.4	605.8	606.2	606.6	607	607.4	607.8
	37	608.2	608.6	609	609.4	609.8	610.2	610.6	611	611.4	611.8	612.2	612.6	613	613.4	613.8
	38	614.2	614.6	615	615.4	615.8	616.2	616.6	617	617.4	617.8	618.2	618.6	619	619.4	619.8
	39	620.2	620.6	621	621.4	621.8	622.2	622.6	623	623.4	623.8	624.2	624.6	625	625.4	625.8
	40	626.2	626.6	627	627.4	627.8	628.2	628.6	629	629.4	629.8	630.2	630.6	631	631.4	631.8
	41	632.2	632.6	633	633.4	633.8	634.2	634.6	635	635.4	635.8	636.2	636.6	637	637.4	637.8
	42	638.2	638.6	639	639.4	639.8	640.2	640.6	641	641.4	641.8	642.2	642.6	643	643.4	643.8
	43	644.2	644.6	645	645.4	645.8	646.2	646.6	647	647.4	647.8	648.2	648.6	649	649.4	649.8
	44	650.2	650.6	651	651.4	651.8	652.2	652.6	653	653.4	653.8	654.2	654.6	655	655.4	655.8
	45	656.2	656.6	657	657.4	657.8	658.2	658.6	659	659.4	659.8	660.2	660.6	661	661.4	661.8
	46	662.2	662.6	663	663.4	663.8	664.2	664.6	665	665.4	665.8	666.2	666.6	667	667.4	667.8
	47	668.2	668.6	669	669.4	669.8	670.2	670.6	671	671.4	671.8	672.2	672.6	673	673.4	673.8
	48	674.2	674.6	675	675.4	675.8	676.2	676.6	677	677.4	677.8	678.2	678.6	679	679.4	679.8
	49	680.2	680.6	681	681.4	681.8	682.2	682.6	683	683.4	683.8	684.2	684.6	685	685.4	685.8
	50	686.2	686.6	687	687.4	687.8	688.2	688.6	689	689.4	689.8	690.2	690.6	691	691.4	691.8
	51	692.2	692.6	693	693.4	693.8	694.2	694.6	695	695.4	695.8	696.2	696.6	697	697.4	697.8

Y Frequencies (7 MHz Per TV Channel)

		Sub Channels																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Channels	22	485.3	485.7	486.1	486.5	486.9	487.3	487.7	488.1	488.5	488.9	489.3	489.7	490.1	490.5	490.9	491.3	491.7
	23	492.3	492.7	493.1	493.5	493.9	494.3	494.7	495.1	495.5	495.9	496.3	496.7	497.1	497.5	497.9	498.3	498.7
	24	499.3	499.7	500.1	500.5	500.9	501.3	501.7	502.1	502.5	502.9	503.3	503.7	504.1	504.5	504.9	505.3	505.7
	25	506.3	506.7	507.1	507.5	507.9	508.3	508.7	509.1	509.5	509.9	510.3	510.7	511.1	511.5	511.9	512.3	512.7
	26	513.3	513.7	514.1	514.5	514.9	515.3	515.7	516.1	516.5	516.9	517.3	517.7	518.1	518.5	518.9	519.3	519.7
	27	520.3	520.7	521.1	521.5	521.9	522.3	522.7	523.1	523.5	523.9	524.3	524.7	525.1	525.5	525.9	526.3	526.7
	28	527.3	527.7	528.1	528.5	528.9	529.3	529.7	530.1	530.5	530.9	531.3	531.7	532.1	532.5	532.9	533.3	533.7
	29	534.3	534.7	535.1	535.5	535.9	536.3	536.7	537.1	537.5	537.9	538.3	538.7	539.1	539.5	539.9	540.3	540.7
	30	541.3	541.7	542.1	542.5	542.9	543.3	543.7	544.1	544.5	544.9	545.3	545.7	546.1	546.5	546.9	547.3	547.7
	31	548.3	548.7	549.1	549.5	549.9	550.3	550.7	551.1	551.5	551.9	552.3	552.7	553.1	553.5	553.9	554.3	554.7
	32	555.3	555.7	556.1	556.5	556.9	557.3	557.7	558.1	558.5	558.9	559.3	559.7	560.1	560.5	560.9	561.3	561.7
	33	562.3	562.7	563.1	563.5	563.9	564.3	564.7	565.1	565.5	565.9	566.3	566.7	567.1	567.5	567.9	568.3	568.7
	34	569.3	569.7	570.1	570.5	570.9	571.3	572.7	573.1	573.5	573.9	574.3	574.7	575.1	575.5	575.9	576.3	576.7
	35	576.3	576.7	577.1	577.5	577.9	578.3	578.7	579.1	579.5	579.9	580.3	580.7	581.1	581.5	581.9	582.3	582.7
	36	583.3	583.7	584.1	584.5	584.9	585.3	585.7	586.1	586.5	586.9	587.3	587.7	588.1	588.5	588.9	589.3	589.7
	37	590.3	590.7	591.1	591.5	591.9	592.3	592.7	593.1	593.5	593.9	594.3	594.7	595.1	595.5	595.9	596.3	596.7
	38	597.3	597.7	598.1	598.5	598.9	599.3	599.7	600.1	600.5	600.9	601.3	601.7	602.1	602.5	602.9	603.3	603.7
	39	604.3	604.7	605.1	605.5	605.9	606.3	606.7	607.1	607.5	607.9	608.3	608.7	609.1	609.5	609.9	610.3	610.7
	40	611.3	611.7	612.1	612.5	612.9	613.3	613.7	614.1	614.5	614.9	615.3	615.7	616.1	616.5	616.9	617.3	617.7
	41	618.3	618.7	619.1	619.5	619.9	620.3	620.7	621.1	621.5	621.9	622.3	622.7	623.1	623.5	623.9	624.3	624.7
	42	625.3	625.7	626.1	626.5	626.9	627.3	627.7	628.1	628.5	628.9	629.3	629.7	630.1	630.5	630.9	631.3	631.7
	43	632.3	632.7	633.1	633.5	633.9	634.3	634.7	635.1	635.5	635.9	636.3	636.7	637.1	637.5	637.9	638.3	638.7
	44	639.3	639.7	640.1	640.5	640.9	641.3	641.7	642.1	642.5	642.9	643.3	643.7	644.1	644.5	644.9	645.3	645.7
	45	646.3	646.7	647.1	647.5	647.9	648.3	648.7	649.1	649.5	649.9	650.3	650.7	651.1	651.5	651.9	652.3	652.7
	46	653.3	653.7	654.1	654.5	654.9	655.3	655.7	656.1	656.5	656.9	657.3	657.7	658.1	658.5	658.9	659.3	659.7
	47	660.3	660.7	661.1	661.5	661.9	662.3	662.7	663.1	663.5	663.9	664.3	664.7	665.1	665.5	665.9	666.3	666.7
	48	667.3	667.7	668.1	668.5	668.9	669.3	669.7	670.1	670.5	670.9	671.3	671.7	672.1	672.5	672.9	673.3	673.7
	49	674.3	674.7	675.1	675.5	675.9	676.3	676.7	678.1	678.5	678.9	679.3	679.7	680.1	680.5	680.9	681.3	681.7
	50	681.3	681.7	682.1	682.5	682.9	683.3	683.7	684.1	684.5	684.9	685.3	685.7	686.1	686.5	686.9	687.3	687.7
	51	688.3	688.7	689.1	689.5	689.9	690.3	690.7	691.1	691.5	691.9	692.3	692.7	693.1	693.5	693.9	694.3	694.7

Z Frequencies (8 MHz Per TV Channel)

		Sub Channels																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Channels	21	470.2	470.6	471.0	471.4	471.8	472.2	472.6	473.0	473.4	473.8	474.2	474.6	475.0	475.4	475.8	476.2	476.6	477.0	477.4	477.8
	22	478.2	478.6	479.0	479.4	479.8	480.2	480.6	481.0	481.4	481.8	482.2	482.6	483.0	483.4	483.8	484.2	484.6	485.0	485.4	485.8
	23	486.2	486.6	487.0	487.4	487.8	488.2	488.6	489.0	489.4	489.8	490.2	490.6	491.0	491.4	491.8	492.2	492.6	493.0	493.4	493.8
	24	494.2	494.6	495.0	495.4	495.8	496.2	496.6	497.0	497.4	497.8	498.2	498.6	499.0	499.4	499.8	500.2	500.6	501.0	501.4	501.8
	25	502.2	502.6	503.0	503.4	503.8	504.2	504.6	505.0	505.4	505.8	506.2	506.6	507.0	507.4	507.8	508.2	508.6	509.0	509.4	509.8
	26	510.2	510.6	511.0	511.4	511.8	512.2	512.6	513.0	513.4	513.8	514.2	514.6	515.0	515.4	515.8	516.2	516.6	517.0	517.4	517.8
	27	518.2	518.6	519.0	519.4	519.8	520.2	520.6	521.0	521.4	521.8	522.2	522.6	523.0	523.4	523.8	524.2	524.6	525.0	525.4	525.8
	28	526.2	526.6	527.0	527.4	527.8	528.2	528.6	529.0	529.4	529.8	530.2	530.6	531.0	531.4	531.8	532.2	532.6	533.0	533.4	533.8
	29	534.2	534.6	535.0	535.4	535.8	536.2	536.6	537.0	537.4	537.8	538.2	538.6	539.0	539.4	539.8	540.2	540.6	541.0	541.4	541.8
	30	542.2	542.6	543.0	543.4	543.8	544.2	544.6	545.0	545.4	545.8	546.2	546.6	547.0	547.4	547.8	548.2	548.6	549.0	549.4	549.8
	31	550.2	550.6	551.0	551.4	551.8	552.2	552.6	553.0	553.4	553.8	554.2	554.6	555.0	555.4	555.8	556.2	556.6	557.0	557.4	557.8
	32	558.2	558.6	559.0	559.4	559.8	560.2	560.6	561.0	561.4	561.8	562.2	562.6	563.0	563.4	563.8	564.2	564.6	565.0	565.4	565.8
	33	566.2	566.6	567.0	567.4	567.8	568.2	568.6	569.0	569.4	569.8	570.2	570.6	571.0	571.4	571.8	572.2	572.6	573.0	573.4	573.8
	34	574.2	574.6	575.0	575.4	575.8	576.2	576.6	577.0	577.4	577.8	578.2	578.6	579.0	579.4	579.8	580.2	580.6	581.0	581.4	581.8
	35	582.2	582.6	583.0	583.4	583.8	584.2	584.6	585.0	585.4	585.8	586.2	586.6	587.0	587.4	587.8	588.2	588.6	589.0	589.4	589.8
	36	590.2	590.6	591.0	591.4	591.8	592.2	592.6	593.0	593.4	593.8	594.2	594.6	595.0	595.4	595.8	596.2	596.6	597.0	597.4	597.8
	37	598.2	598.6	599.0	599.4	599.8	600.2	600.6	601.0	601.4	601.8	602.2	602.6	603.0	603.4	603.8	604.2	604.6	605.0	605.4	605.8
	38	606.2	606.6	607.0	607.4	607.8	608.2	608.6	609.0	609.4	609.8	610.2	610.6	611.0	611.4	611.8	612.2	612.6	613.0	613.4	613.8
	39	614.2	614.6	615.0	615.4	615.8	616.2	616.6	617.0	617.4	617.8	618.2	618.6	619.0	619.4	619.8	620.2	620.6	621.0	621.4	621.8
	40	622.2	622.6	623.0	623.4	623.8	624.2	624.6	625.0	625.4	625.8	626.2	626.6	627.0	627.4	627.8	628.2	628.6	629.0	629.4	629.8
	41	630.2	630.6	631.0	631.4	631.8	632.2	632.6	633.0	633.4	633.8	634.2	634.6	635.0	635.4	635.8	636.2	636.6	637.0	637.4	637.8
	42	638.2	638.6	639.0	639.4	639.8	640.2	640.6	641.0	641.4	641.8	642.2	642.6	643.0	643.4	643.8	644.2	644.6	645.0	645.4	645.8
	43	646.2	646.6	647.0	647.4	647.8	648.2	648.6	649.0	649.4	649.8	650.2	650.6	651.0	651.4	651.8	652.2	652.6	653.0	653.4	653.8
	44	654.2	654.6	655.0	655.4	655.8	656.2	656.6	657.0	657.4	657.8	658.2	658.6	659.0	659.4	659.8	660.2	660.6	661.0	661.4	661.8
	45	662.2	662.6	663.0	663.4	663.8	664.2	664.6	665.0	665.4	665.8	666.2	666.6	667.0	667.4	667.8	668.2	668.6	669.0	669.4	669.8
	46	670.2	670.6	671.0	671.4	671.8	672.2	672.6	673.0	673.4	673.8	674.2	674.6	675.0	675.4	675.8	676.2	676.6	677.0	677.4	677.8
	47	678.2	678.6	679.0	679.4	679.8	680.2	680.6	681.0	681.4	681.8	682.2	682.6	683.0	683.4	683.8	684.2	684.6	685.0	685.4	685.8
	48	686.2	686.6	687.0	687.4	687.8	688.2	688.6	689.0	689.4	689.8	690.2	690.6	691.0	691.4	691.8	692.2	692.6	693.0	693.4	693.8

Channel Assignments by Region

Region	AL Frequency Region
North America, South Korea, Taiwan, Philippines	X
UK and Western Europe , Greenland, Asia, Africa	Z
Australia and New Zealand	Y
Japan	X
Taiwan	X
China	X

SOUND DEVICES

Post Office Box 576
E7556 State Rd. 23 and 33
Reedsburg, Wisconsin 53959 USA

support@sounddevices.com

+1 608.524.0625 main
800.505.0625 toll free (U.S. only)

www.sounddevices.com