



# A20-RX

Two-Channel, True Diversity Receiver  
with **SpectraBand Technology**

User Guide v7.50

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## Welcome to the A20-RX

Experience ultimate flexibility as you find available spectrum away from the crowded UHF TV band. The A20-RX two channel true diversity receiver features SpectraBand technology, which delivers a tuning range of 169 – 1525 MHz in a single unit – an industry first. Superior low-loss, brick-wall SAW filters deliver excellent performance in noisy RF environments, while the AutoAssign feature makes frequency selection and setting quick and easy.

- SpectraBand Technology: compatible with the A20-Mini and A20-TX from 169 MHz – 1525 MHz and all tuning ranges of the A10-TX.
- Advanced Digital True 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 digital system on the market.
- GainForward Architecture compatible with A20 transmitters. Set the transmitter's gain levels via trim control (with an 8-Series) or at the A20-RX (for other mixers).
- Full 10 Hz – 20 kHz audio bandwidth; 100% digital RF modulation and transmission.
- SuperSlot compatible with the SL-2 and 8-Series mixer-recorders.
- Excellent immunity from nearby IFB or camera hop transmitters without the need for external filters or extra cabling.
- Maximum connectivity: SuperSlot, XLR, and TA3 backplates, A-RXMON headphone amp, and A-15PIN two-channel AES Sony camera slot adapter.
- Analog line-level or AES digital audio output.

Our friendly and knowledgeable support team, based in the USA and the UK, is here for all your questions and comments. Our job is to make your job easier.

## SpectraBand

The A20-RX introduces SpectraBand, a technology that enables the A20-RX to tune over a super wide range of 169-1525 MHz. Tuning within this range varies by country. For instance:

In the USA, the available frequency ranges are:

- The VHF band (169-215 MHz)
- The entire UHF TV band (470-608 MHz)
- The 600 MHz guard band (614-616 MHz)
- The 600 MHz duplex gap (653-663 MHz)
- The 900 MHz ISM Band (902-928MHz)
- The 950 MHz STL Band (941.5-960 MHz)
- The 1.5 GHz AFTRCC band (1435-1525 MHz), with an appropriate license.

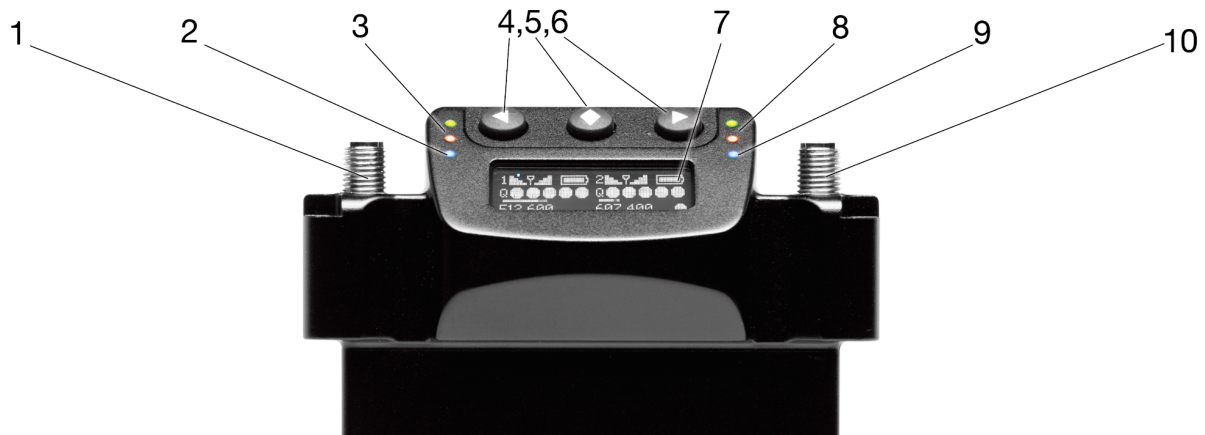
In the UK, the available frequency ranges are:

- The VHF band (173-209 MHz)
- The core UK UHF TV band (470-702 MHz)
- The 800 MHz duplex gap (823-832 MHz)
- The 800 MHz guard band (863-865 MHz)
- The DME bands (961-1015 MHz, 1045-1075 MHz, 1105-1154 MHz), with an appropriate license.
- The IMT band (1518-1525 MHz)

Please see <https://www.sounddevices.com/available-frequencies/> for further detailed information on which frequency ranges are available for each country.

## Panel Views

### Top Panel



#### 1 & 10: Antenna Connector A & B

SMA connectors, connects to included 1/4-wave whip antenna.

#### 2 & 9: Channel 1 & 2 Power LED

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

#### 3 & 8: Channel 1 & 2 Green/Red RF Status LEDs

- Indicates signal strength of received RF
- Channel's green LED illuminates solid green with good RF reception. It starts to flicker green as the received RF signal quality deteriorates.
- Channel's red LED illuminates solid red when the receiver channel loses lock to the transmitter signal due to weak signal or transmitter being turned off.
- Channel's green and red LEDs are off at the fringe of reception.
- Solid green LED and flashing red LED on both channels 1 & 2 when RF signal is approaching overload on either channel.
- Channel's red LED flashes when RF overload is occurring.

#### 4: Left Button

Moves the menu selection to the left, or decrements values.

#### 5: Center Button

Enters the menu selection. Also used to select options in the menu.

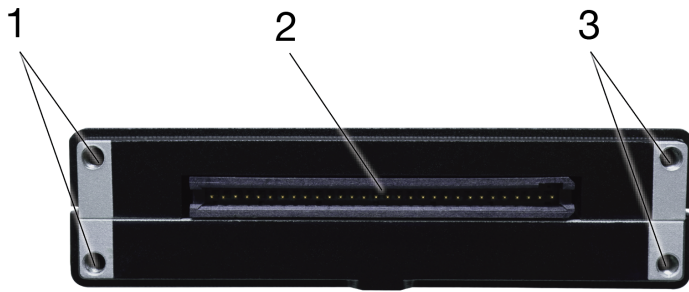
#### 6: Right Button

Moves the menu selection to the right, or increments values.

#### 7: Display

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

**Bottom Panel**



**1: Screw Holes**

Used to secure various backplate accessories to the A20-RX.

**2: Multi-Pin Accessory Connector**

Allows connection to various accessories and adapters, including the A-SL, A-XLR, or A-TA3, See Accessories and Adapters for details.

## Basics of Navigating A20-RX

Navigating the A20-RX is simple and quick using the display and buttons on the top panel.

This section is aimed to provide you with the basics of navigating the A20-RX interface. Various screens and menus are described in detail throughout this User Guide.

The A20-RX displays the Dual Channel screen when powered on. Channel 1 status is displayed on the left and Channel 2 on the right. Press the Left button to navigate through Channel 1 related screens. Press the Right button to navigate Channel 2 related screens.

The directional buttons toggle through the Dual Channel screen, Single Channel screen, GainForward Input menu (under certain conditions), and the Transmitter Information screens. Press the opposite direction to return to the previously displayed screen.

Press the Center button to access the Selection Menu for the channel displayed. The Channel 1 Selection Menu is always accessed from the Dual Channel screen.

The Selection Menu contains channel specific settings and global A20-RX settings. The Selection Menu displays the channel number in the top left hand corner.

In the Selection Menu use the Left and Right button to move through the menus and options. Press the Center button to make a selection. Select the back arrow to return to the previous screen.

## Power

The A20-RX is powered when DC power is present. There are no additional power switches.

### A-SL

With the A-SL attached, the A20-RX receives power via the D-sub. Power is provided by the host device, such as the 8-Series and SL-2, the A10-RACK, or other third-party device.

### A-TA3

With the A-TA3 attached, the A20-RX receives power from the 4-pin Hirose female connector or TA-4 connector.

### A-XLR

With the A-XLR attached, the A20-RX receives power from the 4-pin Hirose female connector. The 4-pin male Hirose connector is a power loop through.

### A-RXMON

With the A-RXMON attached, the A20-RX receives power from its attached Sony L-Mount style battery.

### A-15PIN

With the A-15PIN attached, the A20-RX receives power via the 15-pin connector from the Sony camera.

### Channel Power

Each of the two channels of the A20-RX can be powered on or off individually. When a channel is powered down that portion of the A20-RX no longer draws power. When using A20-RX for a single wireless channel, best practice is to power down the unused channel.

### Channel Power LEDs

The A20-RX has blue Channel Power LEDs for each of its two channels. When first powering the A20-RX without transmitters present, the LEDs illuminate indicating the receiver channel is powered.

The receiver channel can 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 indicates the transmitter battery is in good condition.
- Flashing blue indicates the transmitter battery level is low or depleted.

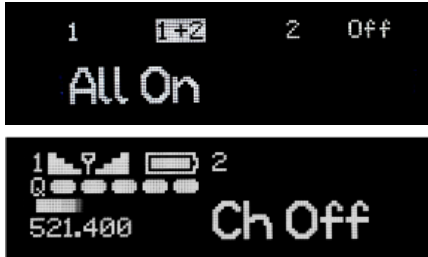
When a paired transmitter is powered down, the blue LED continues to show the last condition of the transmitter battery. If the transmitter is powered back on, or a new transmitter is activated on the channel, that transmitter pairs with the receiver and its transmitter battery condition is shown with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

*Note: 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.*



To power a channel on or off:

1. Press the Center button to enter the Selection Menu.
2. Navigate to Menu>System>Power.
3. Select the channels you want powered on.
  - a. 1 - Channel 1 is powered on, Channel 2 is off.
  - b. 1+2 - Both channels are powered on.
  - c. 2 - Channel 1 is off, Channel 2 is off.
  - d. Off - Both channels are powered off. The A20-RX enters Standby mode.
4. Channels that are turned off appear as 'Ch Off' in the single and dual channel screens.

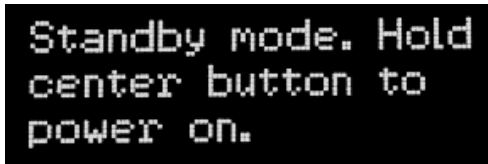


Using shortcuts to power channels on or off:

- To quickly power channel 1 on and off, press and hold the Left and Center button for two seconds.
- To quickly power channel 2 on and off, press and hold the Right and Center button for two seconds.

**Standby Mode**

The A20-RX enters Standby mode when the receiver is powered and both channels are powered off. Pressing any button displays the following.



Power on any channel to exit Standby mode using the power channel shortcut described above.

To power on both channels from Standby mode:

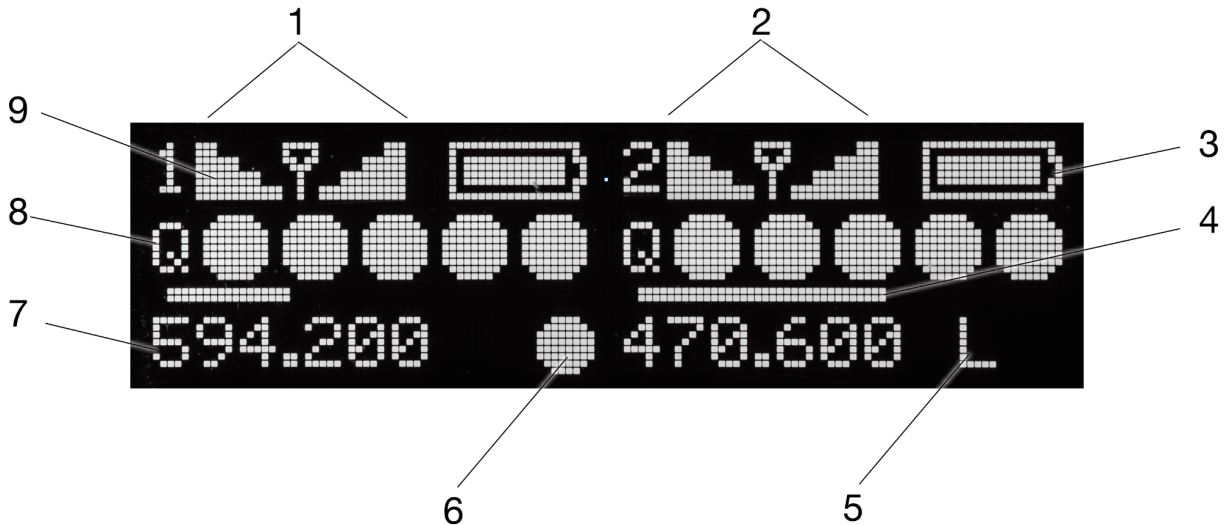
1. Press and hold the Center button for two seconds.
2. Release the Center button when the Channel Power LEDs turn blue.

## Main Display

When the receiver is first powered on, the main display shows the Dual Channel view.

### Dual 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 1 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: TX Battery Status

Battery icons indicate status of transmitters' batteries.

#### 4: Audio Level

Each channel shows a horizontal meter for audio levels. For larger audio meter display, set Menu>Settings>Display>Q-meter to small.

#### 5: Transmitter Limiter/Overload/Mute

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

#### 6: Transmitter Record Status

The Record indicator is displayed when the tuned transmitter is recording.

#### 7: Frequency

Displays the receiver channel frequency.

Region (X, Y, Z), TV Channel, and sub channel are displayed when the Display Options menu is set to TV Ch.

#### 8: 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.

#### 9: RSSI Meter

Receive Strength Indicators (RSSI) are displayed on the screen. The 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.

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.

**Single Channel View**

Pressing the Left or Right buttons when in dual 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 transmitter name and the analog output level or AES.



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



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

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

**Mute Function on the Transmitter**

When the A10-TX, A20-TX or A20-Mini audio is muted from the transmitter, the A20-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.

- Indicates signal strength of received RF
- Channel's green LED illuminates solid green with good RF reception. It starts to flicker green as the received RF signal quality deteriorates.

- Channel's red LED illuminates solid red when the receiver channel loses lock to the transmitter signal due to weak signal or transmitter being turned off.
- Channel's green and red LEDs are off at the fringe of reception.
- Solid green LED and flashing red LED on both channels 1 & 2 when RF signal is approaching overload on either channel.
- Channel's red LED flashes when RF overload is occurring on that channel.

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 an RF signal is approaching overload on either channel, the A20-RX's green LED is solid and its red LED flashes on both channels 1 and 2. When the RF input is overloading on a channel, only the red LED flashes for that channel. This is an indication that the quality of the signal is degrading. Correct an overload condition by:

- Reducing RF power on the transmitter
- Changing the tuning band and frequency such that the the interfering RF signal is out of band.
- Increasing the distance between transmitter and receiver
- Applying attenuation to the antenna system in use.

#### **Display Orientation**

The A20-RX Menu screen operates with its Menu buttons either below or above the display. This is controlled in Menu > Settings > Display > Orientation. Normal is the default orientation with the buttons positioned below the display

## A20 Transmitters - GainForward Input Menu






The A20-RX supports the A20 transmitters' 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 A20-RX home screen, press the channel's directional 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 transmitter signal.

When the A20-RX receiving A20 transmitter signal is slotted into the SL-2 or SL-6 (using the A-SL adapter), the A20-RX Input menu settings are bypassed and hidden. All gain, low cut, and limiter activity are performed and controlled by the 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.

Icon	Description
	<p><b>Exit</b> Returns to the single-channel view.</p>
	<p><b>Gain</b> Sets the gain of the incoming A20-Mini signal.</p> <ul style="list-style-type: none"> <li>• 0 to 60 dB</li> </ul>
	<p><b>Low Cut</b> Sets the Low Cut Filter freq for the received A20-Mini or A20-TX signal. Low cut is 3rd order, 18dB/oct roll off.</p> <ul style="list-style-type: none"> <li>• Off</li> <li>• 40 Hz</li> <li>• 60 Hz</li> <li>• 80 Hz</li> <li>• 100 Hz</li> <li>• 200 Hz</li> </ul>
	<p><b>Limiter</b> Sets the Limiter for the received A20-Mini, A20-TX signal. Attack: 1 ms, Threshold: -6 dBFS, Release: 100 mS, Ratio: 20:1</p> <ul style="list-style-type: none"> <li>• On</li> <li>• Off</li> </ul>
	<p><b>Information</b> Displays the paired A20-Mini's or A20-TX's name and the A20-RX's Input Gain and Low Cut values.</p>

## Selection Menu






The A20-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 Center button. Once in the menu, the Left and Right buttons toggle among options, and the Center button makes the selection.

### Main Menu



Icon	Description
	<p><b>Exit</b> Returns to the main display view.</p>
	<p><b>Frequency</b> Provides access to the Frequency menu. Set the Band, Tune frequencies, and set frequency by TV Channel and Sub Channel.</p> <ul style="list-style-type: none"> <li>• Tune: Tunable from 169-1525 MHz in 25 kHz steps. Available frequencies depend on Country and Band settings.</li> <li>• TV Channel and Sub-Channel are displayed and can be used to set Frequency when operating in the UHF Band (470-694 MHz). An asterisk next to the sub channel indicates that the set frequency is not directly on a preassigned sub channel.</li> <li>• Band sets the frequency range of operation and RF filters to ensure best RF performance.</li> </ul> <p>Available Bands and Frequencies are dependent on the Country setting.</p>
	<p><b>Outputs</b> Enters the Outputs sub-menu.</p> <ul style="list-style-type: none"> <li>• Maximum Level</li> <li>• Audio Polarity</li> <li>• Mode</li> <li>• Test Tone</li> </ul>
	<p><b>Scan</b> Enters the Scan menu. Scanner displays RF activity. Perform a scan on any available Band in the 470-1525 MHz range, the VHF Band, the entire UHF Band (470-694 MHz), UHF1 (470-578 MHz), UHF2 (578-694 MHz), or User Groups frequencies (when activated). The RF scan plot is displayed while a scan is in progress. AutoAssign automatically selects the clearest frequencies based on the RF Scan results of the current Band selection. See Scan for more information.</p>
	<p><b>Privacy</b> Privacy is available on the A10-TX, A20-TX, A20-Mini and the A20-RX. When enabled, the transmitted RF signal is encrypted. In order to be received a four-digit code must be entered.</p> <ul style="list-style-type: none"> <li>• On - A20-RX decodes the received encrypted RF signal. Enter the four-digit key. Use the Left and Right buttons to adjust the numeric value. Press the Center button to set the value and advance to the next digit.</li> <li>• Off - the received RF signal is not decoded. When Privacy is off, the four digit key is displayed as 0000.</li> </ul> <p>See Privacy for more information.</p>
	<p><b>Settings</b> Enters the Settings sub-menu.</p> <ul style="list-style-type: none"> <li>• Modulation</li> <li>• User Groups</li> <li>• Country</li> <li>• Display</li> <li>• LEDs</li> </ul>





	<p><b>System</b> Enters the System sub-menu.</p> <ul style="list-style-type: none"> <li>• Power</li> <li>• Restore</li> <li>• Info</li> </ul>
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**Outputs Sub-menu**

Icon	Description
	<p><b>Exit</b> Returns to the Main menu.</p>
	<p><b>Maximum Level</b> Selects the maximum analog output level. Output level based on a 0 dBFS signal sent from the transmitter. Setting applies per channel. Maximum Level is not available when A20-RX is mounted via A-SL to SL-2 and 8-Series.</p> <ul style="list-style-type: none"> <li>• +14 dBu</li> <li>• +2 dBu</li> <li>• -10 dBu</li> <li>• -22 dBu</li> </ul>
	<p><b>Audio Polarity</b> Selects the polarity of the balanced output signal. Setting applies per channel. Audio Polarity is not available when A20-RX is mounted via A-SL to SL-2 and 8-Series.</p> <ul style="list-style-type: none"> <li>• Normal</li> <li>• Inverted</li> </ul>
	<p><b>Mode</b> Choose the audio output type of the A20-RX. When the A20-RX (with A-XLR or A-TA3) is set to AES the channel 2 XLR or TA3 output connection is not used. This setting applies to both channels. Mode is not available when A20-RX is mounted via A-SL to SL-2 and 8-Series.</p> <ul style="list-style-type: none"> <li>• Analog</li> <li>• AES</li> </ul>
	<p><b>Test Tone</b> Activates a 1 kHz tone oscillator sent directly to the outputs. The transmitter audio signal on the receiver output is disrupted while tone is active. Tone is activated per channel.</p> <ul style="list-style-type: none"> <li>• -18 dBFS</li> </ul>

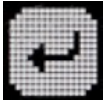
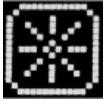
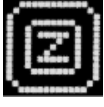
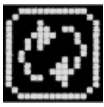
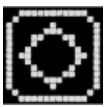
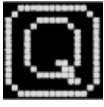
**Settings Sub-menu**

Icon	Description
	<p><b>Exit</b> Returns to the Main menu.</p>
	<p><b>Selects Standard or Long Range Modulation.</b> The Modulation setting must match between the A20-Mini, A20-TX, or A10-TX and the A20-RX in order for the transmitted signal to be received.</p> <ul style="list-style-type: none"> <li>• Std (Standard)</li> <li>• LR (Long Range)</li> </ul>

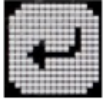

	<p><b>User Groups</b> Sets whether receiver utilizes user groups (User) or manual frequency selection (Factory). See User Groups for more information</p> <ul style="list-style-type: none"> <li>• User</li> <li>• Factory</li> </ul>
	<p><b>Country</b> Selects the country of operation. This determines the bands, frequencies, and TV channel mapping of preset frequencies for your area. Use the 'Other' option if your location is not listed.</p>
	<p><b>Display</b> Enters Display sub-menu.</p> <ul style="list-style-type: none"> <li>• Brightness</li> <li>• Screensaver</li> <li>• Orientation</li> <li>• Options</li> <li>• Q-meter</li> </ul>
	<p><b>LEDs</b> When set to On the LEDs remain illuminated. Off deactivates the LEDs.</p> <ul style="list-style-type: none"> <li>• On</li> <li>• Off</li> </ul>





**Display Sub-menu**

Icon	Description
	<p><b>Exit</b> Returns to the Main menu.</p>
	<p><b>Screen Brightness</b> Sets the brightness of the OLED screen.</p> <ul style="list-style-type: none"> <li>• Five increments, 1–5, 5 is brightest</li> </ul>
	<p><b>Screensaver</b> Sets the duration, in seconds, how long the screen remains on after a button press. Off keeps the screen on continuously with no screensaver.</p> <ul style="list-style-type: none"> <li>• Off - display remains on when unit is powered</li> <li>• 5 sec</li> <li>• 30 sec</li> <li>• 120 sec</li> </ul>
	<p><b>Orientation</b> Sets the operating orientation of A20-RX in relation to the buttons, screen, and LEDs. The A20-RX can be used in an orientation with the buttons below the screen (normal), or with the buttons to the top (flipped).</p> <ul style="list-style-type: none"> <li>• Normal</li> <li>• Flipped</li> </ul>
	<p><b>Options</b> Sets whether Frequency or TV Channel is displayed on the main display.</p> <ul style="list-style-type: none"> <li>• Frequency</li> <li>• TV Ch</li> </ul>
	<p><b>Q-Meter</b> Determines the size of the Q-meter displayed on the single and dual channel screens. The audio meter display size is larger when Q-Meter is set to small and is reduced when Q-Meter is Large.</p> <ul style="list-style-type: none"> <li>• Large</li> <li>• Small</li> </ul>

**System Sub-menu**

Icon	Description
	<p><b>Exit</b> Returns to the Main menu.</p>
	<p><b>Power</b> Turns power for RF receiver channel 1 and 2 on and off.</p> <ul style="list-style-type: none"> <li>• 1 - channel 1 on, channel 2 off</li> <li>• 1 and 2 - both channels 1 and 2 on</li> <li>• 2 - channel 2 on, channel 1 off.</li> <li>• Off - turns both receiver channel circuits off</li> </ul>

	<p><b>Restore</b></p> <p>The restore function resets the A20-RX to the factory default settings. Restore sets Country to Other. Select the current Country in your locality before proceeding.</p> <ul style="list-style-type: none"> <li>• Cancel</li> <li>• Restore</li> </ul>
	<p><b>Info</b></p> <p>Shows information about the A20-RX</p> <ul style="list-style-type: none"> <li>• Serial Number</li> <li>• Firmware Version</li> <li>• DSP Version</li> <li>• Frequency Range</li> </ul>

## Operating the A20-RX

The A20-RX is easy and quick to setup.

### Country

The country of operation determines the available Bands and Frequencies. The country setting also determines the TV channel mapping of preset frequencies in the UHF band. It is important to set the country before transmitting and receiving RF. Country should be reset anytime you change your location to another country.

#### To Set Country:

1. Enter the Menu.
2. Select Settings to enter the Settings sub-menu.
3. Select Country.
4. Use the Left and Right buttons to locate the current country of operation.
5. If the country is not listed, use the 'Other' option.
6. Press the Center button to select the country and return to the Settings sub-menu

### Modulation

Modulation can be set to Standard (Std) or Long Range (LR) per receiver channel. Set Modulation in Menu > Settings > Modulation.

Compared to Standard Modulation, Long Range Modulation has better sensitivity. This increased sensitivity results in better range in challenging RF environments.

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

### SpectraBand

The A20 Digital Wireless System incorporates SpectraBand technology. This allows operation across a frequency range of 169 - 1525 MHz making it possible to find available frequencies wherever you are.



#### To Set Band:

1. Press the Center button to enter the Menu.
2. Select Frequency.
3. Select Band.
4. Use the Left and Right buttons to find the band of frequencies to operate within.
5. Press the Center button to select the Band.
6. After selecting the Band, Set is highlighted. This is to confirm the change of Band. Changing Bands interrupts audio and changes the frequencies assigned to Rx channels

Select Set to confirm the selection or select the back arrow to cancel the Band change and return to the Frequency menu.

### Frequency

Because the A10 and A20 digital RF transmission is inherently immune to intermodulation, multiple A10 and A20 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. When operating in the 902-928 MHz Band, it is recommended to separate channel frequencies by at least 1 MHz.



### To Tune Frequency:

1. Enter the Menu.
2. Select Frequency.
3. Select Tune.
4. Use the Left and Right buttons to set the frequency in MHz to the left of the decimal point. Values increment in 1 MHz steps. Unavailable frequencies for the country of operation are not displayed.
5. Press the Center button to select the frequency and move the selector to adjust the kHz value.
6. Use the Left and Right buttons to set the frequency in kHz to the right of the decimal point. Values increment in 25 kHz steps. Unavailable frequencies for the country of operation are not displayed.
7. Press the Center button to select the frequency and move the selector to Set.
8. Select Set to confirm the frequency or select the back arrow to cancel the frequency change and return to the Frequency menu.

### TV Channel Frequency Presets

To simplify frequency selection in the UHF Band (470 - 694 MHz, country dependent), frequencies are divided into channels and sub channels. The specific frequencies corresponding to channels and sub channels depends on the Country setting (Main > Settings > Country). Countries operate in either 6, 7, or 8 MHz spacing. On the A10-RX, this was labeled X, Y, and Z respectively.

- Channel - corresponds to broadcast television channels.
- Sub Channel - channels are divided in 400 kHz increments called sub channels to speed up frequency selection.
- Frequency - specific frequencies within the receivers tuning range can be selected in 25 kHz increments. When a selected frequency does not correspond with a TV Channel Frequency Preset, an asterisk character (\*) is shown in the display adjacent to TV channel/sub channel assignment.

TV Ch is not displayed or accessible throughout the A20-RX user interface when Band falls outside of the UHF band (470-694 MHz, country dependent).

### To change frequency using TV Channel Frequency Presets:

1. Press the Center button to enter the Menu.
2. Select Frequency to enter the Frequency menu. Be sure that Band set to operate within UHF (470-694 MHz, country dependent).
3. Highlight 'TV Ch', then press the Center button to change the TV Channel Frequency Preset.
4. Highlight 'TV Ch' then press the Center button to edit the TV Channel.
5. Use Left and Right buttons to adjust the 'TV Ch' value then press the Center button to select the value.
6. Highlight 'Sub Ch' then press the Center button to edit the sub-channel.
7. Use Left and Right buttons to adjust the 'Sub Ch' value then press the Center button to select the value.
8. Highlight 'Set' then press the Center button to set the frequency to the TV Ch Frequency Preset.

### Frequency Scanning

The frequency scanning tool uses the radios in the A20-RX to display RF signal level within the selected scan range. This helps locate available frequencies. The scan tool operates over the selected bandwidth of the receiver.

Channel 1 and 2 audio is muted while scanning.

### Scan Options

The frequency range scan options vary depending on country.

- Auto - Scans the current Tuning Band and automatically assigns frequencies to the Rx Channel(s). See Frequency AutoAssign for more information.
- Band - Scans the current Tuning Band.
- UHF - Scans the entire UHF spectrum (470-694 MHz, country dependent).
- UHF 1 - Scans the first half of the UHF band (470-578 MHz).
- UHF 2 - Scans the second half of the UHF band (578-694 MHz).
- Other Bands - Lists all Bands available in your country from lowest to highest frequencies. Scans are performed on the frequency range displayed. Performing a scan does not change the Band of operation.
- User Scan - When user groups are in use, the User Scan option is available in the Scan menu. This options scans only frequencies of the loaded user group. See User Groups for more information.

### To perform an RF Scan:

1. Enter the menu and select Scan.
2. Select the Scan option for the frequency range you want to operate in. The scan starts automatically.

Icon	Description
>>	<b>Run Scan</b> Select >> to start the RF Scan. Scans are performed from lower frequencies to higher frequencies. The scan is complete when the cursor reaches the end of the scan range at the far right of the screen then returns to the beginning of the scan range on the far left. Press the Left button to stop scanning.
>	<b>Step Forward</b> Select > to move the cursor forward by 200 kHz.
<	<b>Step Back</b> Select < to move the cursor backwards by 200 kHz.
<<	<b>Run Backwards Scan</b> Select << to start the RF Scan from the higher frequencies of the scan range to the lower frequencies. The scan is complete when the cursor reaches the beginning of the scan range at the far left of the screen then returns to the end of the scan range on the far right. Press the Right button to stop scanning.
Set	<b>Set</b> Select Set to assign the frequency at the cursor position to the Rx channel.
Auto	<b>AutoAssign</b> Select Auto to automatically assign frequencies to Rx channels. See Frequency AutoAssign for more information. AutoAssign is available when scanning the current Band selection.

When setting a frequency that falls outside the range of the current Band selection, the following confirmation appears:

Change Tuning Band?

- Yes - changes the band and frequency of the Rx Channel.
- No - frequency and band remains unchanged and returns to the scan results.

#### Frequency AutoAssign

AutoAssign scans the current tuning band and selects available frequencies for the A20-RX's two channels. This feature is designed to make frequency selection quick and easy. There are two ways to AutoAssign frequencies:

1. AutoAssign without a prior scan.
2. AutoAssign from an existing scan.

#### To AutoAssign frequencies without a prior scan:

1. Enter the menu and select Scan.
2. Select Auto. AutoAssign looks for clean frequencies in the current Band.
3. Select the channel(s) you want to assign.
  - a. 1 - AutoAssigns a frequency to channel 1.
  - b. 1+2 - AutoAssigns a frequency to channels 1 and 2.
  - c. 2 - AutoAssigns a frequency to channel 2.

The frequency assigned to the channel(s) is displayed on the screen. The preset frequency is also displayed when operating in the UHF band.

4. Select the back arrow to return to the main menu.

#### To AutoAssign from an existing scan:

1. Enter the menu and select Scan.
2. Select Band to scan the current Band.
3. After the scan completes, select Auto.
4. Select the channel(s) you want to assign.
  - a. 1 - AutoAssigns a frequency to channel 1.
  - b. 1+2 - AutoAssigns a frequency to channels 1 and 2.

- c. 2 - AutoAssigns a frequency to channel 2.

The frequency assigned to the channel(s) is displayed on the screen. The preset frequency is also displayed when operating in the UHF band.

5. Select the back arrow to return to the main menu

**Antennae**

The SMA antenna connectors are used to mount the included 1/4-wave whip antenna. For specialty applications external, high-gain receiving antennae can be attached to the SMA connectors. Ensure that the antennae used are built for the correct frequency. See Antenna Guide for more details.

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

## Audio Output and Control

The A20-RX outputs either analog line level or AES3 digital audio. This global setting applies to both channel outputs.

### Analog Output

When set to analog in the Selection Menu the A20-RX outputs low-impedance, balanced line level audio. It is designed to connect to balanced or unbalanced line level inputs. To unbalance the output, float pin-3.

### AES Digital Output

When set to AES output in the Selection Menu the A20-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 A-XLR accessory, the channel 1 XLR connector is used for AES3 output. The channel 2 XLR connector is not active when set to AES output.

## SuperSlot

The A20-RX with A-SL accessory backplate slots directly into the Sound Devices SL-2 for powering, audio, and communication with the 8-Series Mixer-Recorders. Visit the respective 8-Series Mixer-Recorder User Guide for full details on 8-Series SuperSlot support of the A20-RX.

The Sound Devices SL-6 does not support the full frequency range of the A20-RX. When using an A20-RX with SL-6 and Scorpio, either limit the range to the UHF Band 470-694 MHz or attach antennas directly to the A20-RX bypassing the SL-6 RF distribution.

## Frequency Band Restrictions

The wireless system operator needs to be aware of local regulations and comply with all applicable laws regarding operation of wireless devices.

In some restricted frequency bands, the operator will need to obtain an unlock code from Sound Devices to assign a restricted frequency to the transmitter. Once a license has been granted, please contact Sound Devices (RF\_Request@SoundDevices.com) to obtain the necessary unlock code.

An example of a frequency band requiring an unlock code in the United States is 1435-1525 MHz. Program Making and Special Events (PMSE) wireless operators typically call 1435-1525 MHz the "AFTRCC band". AFTRCC stands for Aerospace and Flight Test Radio Coordinating Council. This organization coordinates a number of frequency bands for use by air and spacecraft in the United States. This includes 1435-1525 MHz.

Per the United States Federal Communications Commission (FCC) rules, Wireless microphones are allowed as secondary users in the 1435-1525 MHz AFTRCC band. This is detailed in the FCC Part 74 rules:

<https://www.ecfr.gov/current/title-47/chapter-I/subchapter-C/part-74>

One section of the Part 74 rules that's of particular interest to operators seeking an AFTRCC band license is 74.803(d):

[https://www.ecfr.gov/current/title-47/chapter-I/subchapter-C/part-74#p-74.803\(d\)](https://www.ecfr.gov/current/title-47/chapter-I/subchapter-C/part-74#p-74.803(d))

Similar to the 914.5 - 944 MHz band, nationwide licenses are not typically granted for wireless operation in 1435-1525 MHz.

Generally speaking, a wireless operator needs to show they've used all other available spectrum before the AFTRCC will consider a license request in the 1435-1525 MHz range. If granted, the license is normally assigned for a specific location and a specific time range.

Sound Devices encourages all wireless operators to obtain a Part 74 license, and specifically to make sure applicable parts of the 600 MHz and 950 MHz range are included with their license application. This can help show an operator is aware of the available spectrum and is utilizing it responsibly.

More information on Part 74 licensing can be found here: <https://www.local695.com/fcc-licensing/>



## 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 A20-RX 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>

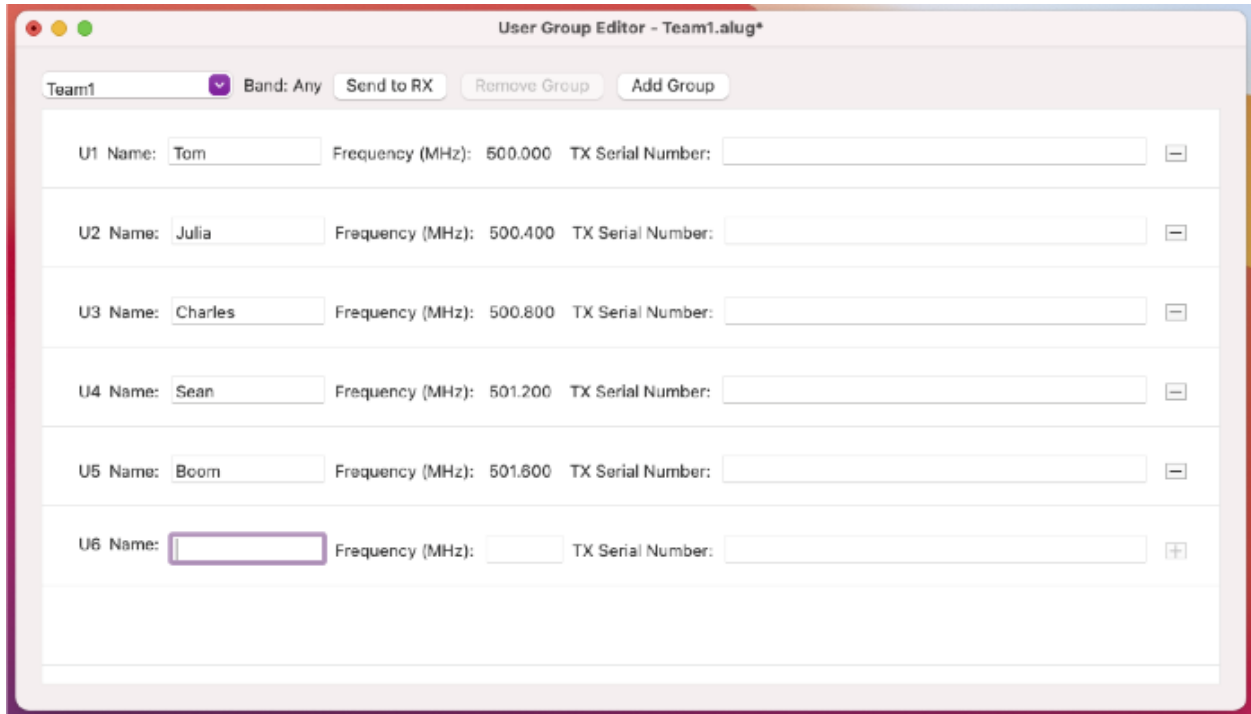
Once created, the User Group files are uploaded to A10-TX, A10-RX, or A20-RX.

A20-Mini does not support User Groups. User Groups are only available when operating within the UHF Band (470-694 MHz, country dependent).

### 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 the frequencies for the various A10-TX models available. Selecting Any allows all frequencies available on the A10 system for assignment to users in the group.
5. 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.
6. Select OK. The User Group Editor screen appears with fields for the first user (U1) available. Enter a Name and Frequency for U1 in the fields provided. The A10-TX transmitter's serial number is optional.
7. 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.
8. 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 give a name and frequency, which after upload, will then be displayed on A10 receivers and transmitters. Each group can have up to 32 users.

When the User Group .ALUG file is intended for use on the A20-RX, ensure that all user frequencies fall within the same A20-RX tuning band.



SD-Utility supports the creation of up to eight User Groups, each with a max of 32 users, per User Group file. User Group files have a file extension of .ALUG.

**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.

User Group files may be saved for future use and modification. When saving the User Group file, SD-Utility defaults the file name to the first User Group name in the drop-down list.

**To load an User Group 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 A20-RX**

While each User Group file may contain up to eight user groups, only one group at a time may be sent to and loaded on an A20-RX. A user group is sent to the A20-RX-XLR by directly connecting it to a computer via USB. Sending a user group to the A20-RX-SL is achieved via the A10-RACK or the Sound Devices 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 A20-RX via A-XLR, A-TA3, A-RXMON, or A-15PIN:**

1. Start the SD-Utility application.
2. Connect the A20-RX via USB to the computer. The A-XLR and A-RXMON connect via Micro-USB. The A-TA3 and A-15PIN connect via USB-C. Note: A USB 3.0 port is required to power the A20-RX via the A-TA3 and A-15PIN. If a USB 3.0 port is not available, connect two USB 2.0 ports to the A-TA3 or A-15PIN using the Sound Devices MX-USB Y USB-C to two USB-A Y-Cable.
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 A20-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 and A20-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 A20-RX-SL receivers via 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 A20-RX-SL receiver(s) in the SL-2, 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 knob to select SuperSlot>SL-2 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 to load from the User Group file.

**Loading User Groups on A20-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.

A20-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 Center Menu button on the receiver.
2. Select Settings > User Groups > User.

**To dial in a specific User Group frequency:**

1. Press the Center 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 Update

Periodically Sound Devices issues new firmware for the A20-RX receiver. Make certain to register your product at the Sound Devices website to receive firmware update notifications.

Firmware is installed on the A20-RX via SD-Utility or via Sound Devices 8-Series Mixer-Recorders. Download the latest firmware PRG from the Sound Devices website at: <https://www.sounddevices.com/download/>



### 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 need to download and install the CP210x USB to UART Bridge VCP Drivers from the Silicon Labs website. [Read installation instructions.](#)

A20-RX connects to SD-Utility via the A-XLR, A-TA3, A-RXMON, A-15PIN, or A10-RACK.

#### To update A20-RX firmware via A-XLR, A-TA3, A-RXMON, or A-15PIN:

1. Download new A20-RX firmware PRG file from the Sound Devices website.
2. Launch the SD-Utility application.
3. Connect the A20-RX via USB to the computer. The A-XLR, A-TA3, A-RXMON connect via Micro-USB. The A-15PIN connects via USB-C. Note: A USB 3.0 port is required to power the A20-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.
4. Connect a power source to the A-XLR, A-TA3, A-RXMON. The A-15PIN does not require additional power.
5. Power on the A20-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 A20-RX firmware via A10-RACK:

1. Download new A20-RX 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.
4. Ensure all A20-RX receivers are properly slotted into the A10-RACK.
5. Power on the A10-RACK and A20-RX-SL receivers.
6. From SD-Utility, select File > Update RX and then select the firmware PRG file to install. SD-Utility detects all A20-RX-SL receivers in the A10-RACK. SD-Utility lists all connected A20-RX receivers along with their serial number and current firmware version.
7. SD-Utility detects receivers running older versions of Firmware and automatically selects them for updating. Otherwise, select the Update check box for each A20-RX to update, then click Update.
8. Click OK to confirm when prompted. A status bar indicates the progress of each A20-RX update. Receivers are updated one at a time. As the receiver is updated, its screen displays Programming and the LEDs turn off. After the update, the receiver returns to normal operation. An Update Complete popup appears after all receivers have been updated.
9. Click OK when Firmware Update is complete.

#### Updating A20-RX from Sound Devices Mixer-Recorders

Updating the firmware on the A20-RX-SL may be done via the Sound Devices 8-Series Mixer-Recorders, while the receiver is slotted into the SL-2 or SL-6.

#### To update A20-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. Press and hold the METERS button, then press the Headphone knob to access Receiver Overview screen.
5. Turn and press the Select knob to select a receiver. This accesses the Receiver Details screen.
6. Slide RTN/FAV switch to select Options.
7. Select Update Firmware. Confirm the selected file when prompted and select OK to continue.  
As the receiver is updated, its screen will display Programming and the LEDs will turn off.

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

## Accessories and Adapters

The A20-RX receiver is modular in design. Any of the following accessories can be used with the A20-RX, which may be more suited to a particular workflow or application.

### A-SL

25-Pin D-Type Uni/Superslot adapter. Provides power, analog or AES audio and communication with SuperSlot devices.

### A-XLR

Breakout cables to 4-Pin Hirose Female DC power in, 4-Pin Hirose Male power loop through, two XLR Males for analog or AES audio output. Includes Micro-USB for connecting A20-RX to computers for firmware updating and transferring User Group files.

### A-TA3

Offers TA4 and Hirose DC inputs, two TA3 connectors for analog or AES audio outputs, USB-C for connecting A20-RX to computers for firmware updating and transferring User Group files.

### A10-RACK

4-slot wireless enclosure. The A10-RACK offers convenient mounting, powering, RF, and audio connectivity for four uni- or SuperSlot wireless receivers in its 1 RU chassis. The A10-RACK includes built-in antenna distribution with powering for active antennas. Up to eight channels of audio from single or dual-channel receivers appear on both its XLR outputs and over Dante™ audio-over-Ethernet.

### A-15PIN

Cradle for A20-RX with 15pin D-type adapter. For use with Sony camcorders that have slot-in for wireless, or Sony extension units with slot-in for wireless. The A-15PIN allows the A20-RX to be used in the Sony slot without the need for external cables. The audio is passed through the internal slot as a 2 channel AES input. When connected to the camcorder via the A-15PIN, the A20-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 on the Sound Devices website:

<https://www.sounddevices.com/a-15pin-installation/>

### A-RXMON

Monitor transmitters on set with this handy belt-worn headphone amp for your A20-RX. The A-RXMON provides a simple, portable solution for easily monitoring two transmitter audio channels with headphones. See the A-RXMON User Guide for more details.

### A-VHF-HEL-SMA

Set of 2 helical dipole antennas with SMA connectors for the VHF (169 - 220 MHz) band.

### Attaching A20-RX Backplate Accessories

Use the following instructions when removing and attaching the A-XLR, A-TA3, and A-SL.

1. Remove the four perimeter screws of the attached backplate accessory. Set screws aside for later use. For the A-SL, do not remove the two screws on either side of the 25-pin D-Type connector.



2. Remove the attached accessory.

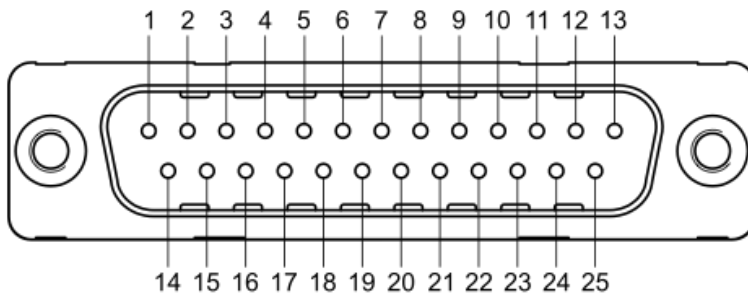


3. Position the new accessory making connection to the A20-RX's Multi-Pin Accessory connector, then replace the screws removed in step 1.



**A20-RX-SL/DB-25 Connector Pin Assignments**

The illustration below shows the pin assignments of the A20-RX-SL when viewing the bottom connector.



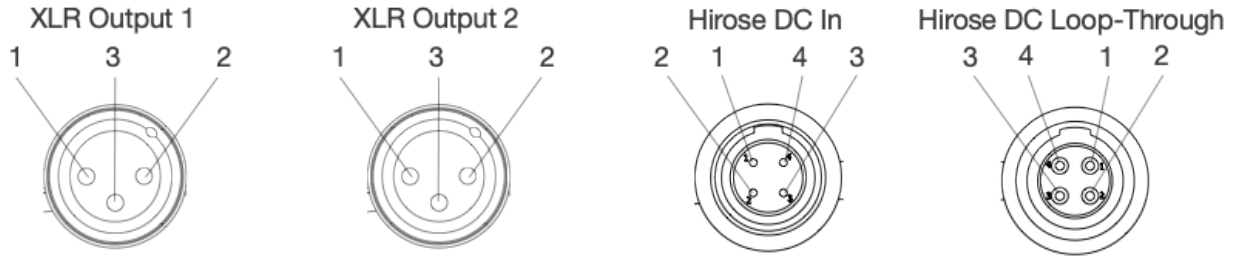
DB-25 Pin	Name	Description
1	Ground	Ground connection
2	Ch 1+ analog / Ch 1,2 AES +	Ch 1 + analog audio out, +2 dBu level (+/- 0.5 dB), balanced. Alternately, Ch1 and Ch 2 AES3+ (balanced, 110 ohm, transformerless).

3	Ch 1 - analog / Ch 1,2 AES -	Ch 1 - analog 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+ analog	Ch 2 + analog audio out, +2 dBu level (+/- 0.5 dB), balanced.
16	Ch 2- analog	Ch 2 - analog 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 A20-RX. 0/3.3V signaling.
23	UART receive (0/3.3V)	UART to A20-RX. 0/3.3 V signaling.
24	no connection	
25	Ground	Ground connection



**A20-RX-XLR/A-XLR Connector Pin Assignments**

The illustration below shows the pin assignments of the A20-RX-XLR when viewing the break-out connectors.

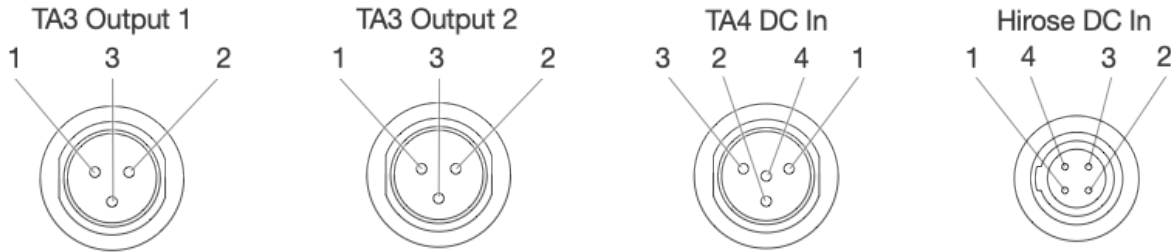


Connector	Pins	Name	Description
XLR Output 1	1	Ground	Ground connection
	2	Ch 1+ analog / Ch 1,2 AES +	Ch 1 + analog audio out, +2 dBu level (+/- 0.5 dB), balanced. Alternately, Ch1 and Ch 2 AES3+ (balanced, 110 ohm, transformerless).
	3	Ch 1 - analog / Ch 1,2 AES -	Ch 1 - analog audio out, +2 dBu level (+/- 0.5 dB), balanced. Alternately, Ch 1 and Ch 2 AES3- (balanced, 110 ohm, transformerless).
XLR Output 2	1	Ground	Ground connection
	2	Ch 2+ analog	Ch 2 + analog audio out, +2 dBu level (+/- 0.5 dB), balanced.
	3	Ch 2 - analog	Ch 2 - analog audio out, +2 dBu level (+/- 0.5 dB), balanced.
Hirose DC In	1	Power -	
	2	Not connected	
	3	Not connected	
	4	Power +	6-18 VDC
Hirose DC Loop-Through	1	Power -	
	2	Not connected	
	3	Not connected	
	4	Power +	6-18 VDC
Micro-USB	No pin out shown	Provides connection to computer for updating firmware and transferring files. Micro-USB does not power the unit. If using Micro-USB, power needs to be applied to the	

		Hirose In.	
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**A20-RX-TA3/A-TA3 Connector Pin Assignments**

The illustration below shows the pin assignments of the A20-RX-TA3 when viewing the bottom connectors.



Connector	Pins	Name	Connection
TA3 Output 1	1	Ground	Ground connection
	2	Ch 1+ analog / Ch 1,2 AES +	Ch 1 + analog audio out, +2 dBu level (+/- 0.5 dB), balanced. Alternately, Ch1 and Ch 2 AES3+ (balanced, 110 ohm, transformerless).
	3	Ch 1 - analog / Ch 1,2 AES -	Ch 1 - analog audio out, +2 dBu level (+/- 0.5 dB), balanced. Alternately, Ch 1 and Ch 2 AES3- (balanced, 110 ohm, transformerless).
TA3 Output 2	1	Ground	Ground connection
	2	Ch 2+ analog	Ch 2 + analog audio out, +2 dBu level (+/- 0.5 dB), balanced.
	3	Ch 2 - analog	Ch 2 - analog audio out, +2 dBu level (+/- 0.5 dB), balanced.
TA4 DC In	1	Power -	
	2	Not connected	
	3	Not connected	
	4	Power +	6-18 VDC
Hirose DC In	1	Power -	
	2	Not connected	
	3	Not connected	
	4	Power +	6-18 VDC
USB-C	No pin out shown	Provides connection to computer for updating firmware and transferring files. USB-C does not power the unit. If	

		using USB-C, power needs to be applied to the TA-4 or Hirose.	
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## A20-RX Specifications

Specifications are subject to change without prior notice.

For the latest information available on all Sound Devices products, visit our website: [www.sounddevices.com](http://www.sounddevices.com)

### RF Tuning

- 169 to 1525 MHz
- SpectraBand Technology
- Transmitters tunable in 25 kHz steps
- Available frequencies depend on country of operation

### Modulation

- Proprietary digital RF modulation
- Standard or Long Range, selectable

### Latency

- Standard modulation = 2 ms
- Long Range modulation = 3.9 ms
- Measured at analog output

### Audio Frequency Response

- 10 Hz–20 kHz

### Low Cut

- Off, 40 Hz, 60 Hz, 80 Hz, 100 Hz, 200 Hz
- 3rd order, 18dB/oct roll off.

### Limiter

- Attack: 1 ms, Threshold: -6 dBFS, Release: 100 mS, Ratio: 20:1

### 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 output impedance

### Digital Audio Output

- AES3 balanced connection, 110 ohms output impedance, left=channel 1, right=channel 2

### Menu and Controls

- OLED menu display, 3 button navigation

### Privacy

- User settable 4-digit PIN

### Powering

- 6–18 VDC, approx 3.1 W with one receiver active, approx 4.2 W with two receivers active

### Operating Temperature Range

- -10 °C to +55 °C

### Weight

- 165 g, 5.8 oz, Measured without backplate accessories

### Dimensions(H x W x D)

- 113.7 mm x 78.5 mm x 26.6 mm, 4.48 in x 3.09 in x 1.05 in, Measured without backplate accessories

## Antenna Guide

The A20-RX ships with an antenna set which includes:

- 2 470-548 MHz antennas (1 straight, 1 right-angle)
- 2 548-638 MHz antennas (1 straight, 1 right-angle)
- 2 uncut antennas (1 straight, 1 right-angle)
- 6 antenna caps

Sound Devices offers additional pre-cut and uncut antennas as available options. In addition, a set of 2 helical dipole antennas (**A-VHF-HEL-SMA**) with SMA connectors is available for the VHF (169 - 220 MHz) band.

Attach antennas with a length specific to the frequency in use. Using the wrong length of antenna reduces RF range.

### Cutting Antennas to Length

Uncut antennas need to be cut to the length specific to the frequency for intended use.

- Determine the frequency range intended for the uncut antenna using the Antenna Length chart.
- Measure the antenna for the cut point. Measurements should begin from the bottom of the SMA connector.
- Using a pair of cutters, cut the quarter-wave antenna at the specified cut point.
- Position the antenna cap onto the cut-end of the antenna and push the cap firmly onto the antenna.



#	Frequency Range	Antennae Length in mm	Antennae Length in inches
1	169 - 216 MHz	388 mm	15.28"
2	470 - 548 MHz	140 mm	5.51"
3	548 - 663 MHz	120 mm	4.72"
4	638 - 738 MHz	104 mm	4.09"
5	738 - 865 MHz	89 mm	3.50"
6	902 - 1015 MHz	74 mm	2.92"
7	1045 - 1154 MHz	65 mm	2.55"
8	1240 - 1260 MHz	57 mm	2.24"
9	1350 - 1525 MHz	49 mm	1.93"

## Servicing the A20-RX

Do not attempt to service the A20-RX. The internal parts are microscopic and not user serviceable. Please send to Sound Devices for any service needs. <https://service.sounddevices.com/contact-support/>

## Warranty

Sound Devices, LLC warrants the items listed above against defects in materials and workmanship for a period of ONE (1) year from date of original retail purchase. Users who register their product directly with Sound Devices Technical Support using the online form or by phone, will receive an additional ONE (1) year of warranty coverage, extending the complete warranty period to TWO (2) years from the date of original retail purchase. In order to extend the warranty coverage period, registration must be completed within the initial ONE (1) year warranty period. Products must be purchased through authorized Sound Devices resellers to qualify for Warranty coverage. Damage resulting from the opening of a Sound Devices product or attempted repairs by a non-authorized Sound Devices repair technician will void warranty coverage.

This is a non-transferable warranty that extends only to the original purchaser. Sound Devices, LLC 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.

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For all service, including warranty repair, please contact Sound Devices for an RMA (return merchandise authorization) before sending your unit in for repair. Product returned without an RMA number may experience delays in repair. When sending a unit for repair, please do not include accessories, including SSD drives, CF cards, batteries, power supplies, carry cases, cables, or adapters unless instructed by Sound Devices. Sound Devices repairs and replacements may be completed using refurbished, returned or used parts that have been factory certified as functionally equivalent to new parts.

Sound Devices, LLC

Services Repair RMA #XXXXXX

E7556 State Road 23 and 33  
Reedsburg, WI 53959 USA  
Telephone: +1-608-524-0625

## Legal Notices

Product specifications and features are subject to change without prior notification. Read and fully understand this manual before operation.

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### FCC Conformity



The A20-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.

### 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.

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.

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. .

**WEEE Statement**

If you wish to discard a Sound Devices product in Europe, contact Sound Devices (England) for further information.





# Declaration of Conformity



Manufacturer's Name: Sound Devices, LLC  
Manufacturer's Address: E7556 State Road 23 and 33  
Reedsburg, WI 53959 USA

**We, Sound Devices LLC, declare under our sole responsibility that the product:**

Product Name: A20-RX  
Model Number: DDX1010  
Description: Digital Wireless Microphone Receiver

**is in conformity with the essential requirements of the following relevant Union harmonisation legislation:**

Radio Equipment Directive (RED) 2014/53/EU

**The following harmonised standards and/or normative documents were applied:**

Health & Safety (Article 3.1(a) of RED)	EN 6065:2014
EMC (Article 3.1(b) of RED)	EN 301-489-9 v2.1.1 EN 301-489-1 v1.9.2
Radio Parameters (Article 3.2 of RED)	EN 300 422-2 v2.1.2 EN 300 422-1 v2.1.2

**Signed for and on behalf of Sound Devices LLC:**

July 20th, 2022

Date

Matt Anderson - Sound Devices, LLC President

**SOUND**  **DEVICES**

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