

# Allen & Heath XB-14

Compact and cost-effective can be a beautiful combination — especially when built by Allen & Heath. **HUGH ROBJOHNS** tunes in to the XB-14 radio broadcast mixer.

Among the almost countless number of small-format mixing consoles on the market very few are equipped with properly thought out broadcast-style facilities typically required by small community, hospital, and university radio organisations, or live Internet streaming. However, the new Allen & Heath XB-14 console is designed for precisely that kind of application and market; at around UK£816 (including VAT) it is surprisingly affordable.

The XB-14 is provided with a nicely balanced range of features ideally suited to small broadcasting setups, with facilities that can be configured either for presenter self-operation or separate presenter/engineer working styles. As such, the desk incorporates four mono mic/line inputs, two Telco (or outside broadcast) inputs — each with individual clean-feed (mix-minus) sends, and seven stereo line inputs shared across four stereo faders. Four of these stereo line inputs are balanced, two are unbalanced, and the last is via a USB port for connection to a computer DAW or play-out system. I make that a total of 13 channel inputs, but since the mixer's name implies a fourteenth we should include the unbalanced external input to the monitoring section. The console has two main stereo mix buses (nominally transmission output and record bus), plus a mono auxiliary.

As you might expect of a bespoke broadcast console, the desk incorporates fader-open logic, machine start/stop buttons, and facilities for automatic monitor speaker muting and external 'cough-key' muting. There is also built-in talkback with routing to the Telco channels and guest presenter headphones. The construction is to Allen & Heath's usual high standards, with individual channel circuit cards suspended vertically within the robust steel chassis, and all the rotary control knobs are fixed directly to the metalwork via metal shaft nuts.

The XB-14's basic configuration is simple and logical, clear panel labels making most functions intuitive. Each of the four mono mic/line channels is provided with an XLR for the mic input and a 1/4-inch TRS socket for balanced line inputs — the latter overriding the mic input when anything is plugged in. A second TRS socket provides an unbalanced insert point operating with a nominal 0dBu signal level. A continuous rotary control adjusts the channel gain (-6 to +63dB for mic inputs and -10 to +26dB for line inputs), and a pushbutton engages a 100Hz 12dB/octave high-pass filter. The sweet-sounding channel EQ includes high (12kHz) and low (80Hz) shelf sections with a ±15dB range and centre detents, plus a sweep-mid section spanning 120Hz to 4kHz. There is no EQ bypass button.

The console's single auxiliary bus is accessed via a rotary control with a pre-fade source button. Oddly, also enclosed within the panel graphics for the Aux section is a button labelled Mix B Bus, which is actually an alternative stereo mix bus associated with the post-pan channel output. The channel pan control (with centre detent) sits above a large illuminated On button, which mutes all channel outputs (including the pre/post Aux send). The button can be disabled if required via a rear-



panel dip-switch, or activated remotely for a 'cough-key' function (in which case a red Rem Mute LED lights just above the button). Two more LEDs provide basic channel metering, labelled Signal (green above -15dBu) and Peak (red when 5dB below clipping), while a round pushbutton and associated yellow LED activates the PFL monitoring. A 100mm fader provides unity gain at the top. By default, the first mic/line channel is configured as the presenter/engineer's channel for internal talkback purposes, though this can be changed via internal links if required.

The two Telco channels use XLRs for the line input and associated clean-feed (mix-minus) output, and the same gain, high-pass filter, and high/low shelf EQ facilities are provided as with the mic/line channels. A non-latching Talk button sends the pre-fade, pre-mute signal from the designated mic/line channel to the clean-feed output for direct communications with the remote source, while another button selects the sustaining source for the clean-feed between the main mix bus (in mono) or the aux bus. Impressively, the aux system incorporates its own clean-feed matrix so that even if the Telco channel is contributing to the aux bus and the aux bus is routed to the clean-feed output, the remote source will still not receive its own output signal down the line. The rest of the channel facilities are exactly the same as those for the mic/line channels. Again, the On button can be disabled if required.

The first two stereo line channels can be switched between balanced or unbalanced inputs, the former with automatic dual-mono switching if only one connector is inserted. The third stereo channel can be selected between balanced inputs or USB interface, while the fourth is balanced line only. The signal level for each input source can be adjusted independently. The rest of the channel facilities are similar to those on the Telco channel, although a balance control replaces the pan pot and the On button can be assigned to provide remote start-stop commands, which, very sensibly, are routed to the selected channel input

source. Again, dip-switches allow the muting function to be disabled, with the option to retain the switch's LED as a tally light.

The main output is controlled with a 100mm fader (unity at the top); just above is a rotary control to adjust the Mix B Bus level. Separate volume controls are provided for the control room and guest headphones (the latter with two headphone sockets), and a non-latching button activates talkback from the assigned mic channel to the guest headphones. Independent source switching (with options of Main, Mix B, Aux, USB or Ext inputs) is provided for the control room monitors/headphone output and the guest headphone output. A third level control (and associated Dim button) adjusts the control room speakers independently of the headphones; a small recessed button activates the speaker muting whenever a mic fader is open. There is no dedicated output for studio monitor speakers, or facilities to send and receive external talkback.

A stereo LED bargraph meter follows the control room monitor source selection, with PFL override; a red LED lights when any PFL button is pressed. A recessed button routes the PFL signal to the guest headphones if required; another activates phantom power for all four mic channels.

The main programme outputs are provided on XLRs, with stereo and mono pre-fade outputs on phono sockets (and at a nominal 0dBu operating level). The Mix B Bus output is also presented on unbalanced phono sockets, as is the external monitor section input. The aux output is presented on a TRS socket, while two more provide a stereo insert for the main programme mix bus.

In addition to dip-switch configurable channel mute buttons, three D-Sub connectors on the rear panel provide outputs for an external stereo meter (complete with power rails), fader-open, and remote mute logic signals for the mic and Telco channels, plus start/stop machine control pulses for the seven stereo line inputs.

The USB interface passes 16-bit stereo audio in both directions simultaneously, with either 32, 44.1, or 48kHz sample rates (as determined by the computer software). It runs on native PC/Mac audio drivers.

I was very impressed with the XB-14. It feels well built, all the buttons have positive actions, and the remote control facilities cater well for most requirements. The two Telco channels work brilliantly with their comprehensive clean-feed and talkback facilities, and the large number of stereo inputs and sensible remote control assignments should handle most input source needs, even though they have to be preselected to four faders. Sound quality is excellent throughout, with generous headroom and low noise, distortion, and crosstalk figures. This is a remarkable product at an equally remarkable price. ■

## PROS

Nicely balanced range of features and facilities; two very comprehensive Telco channels; reliable A&H sound quality; thoughtful remote control and system configuration options; attractively priced.

## CONS

No channel EQ bypass; no studio speaker output; no external talkback I-O.

## Contact

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