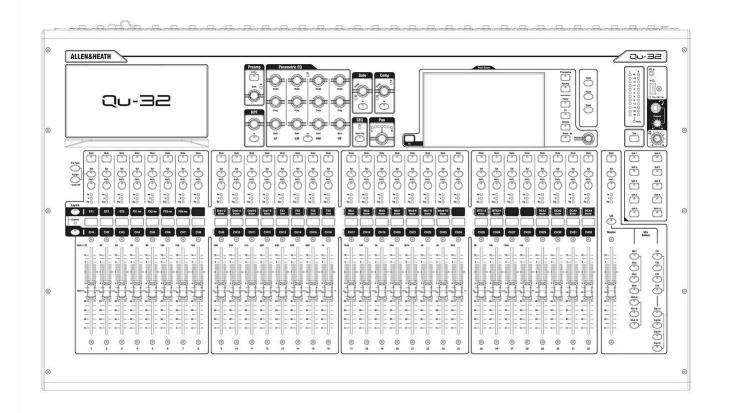


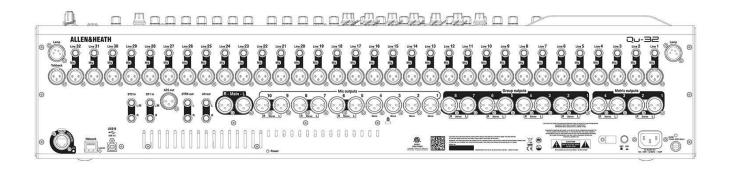
Technical Datasheet

Overview

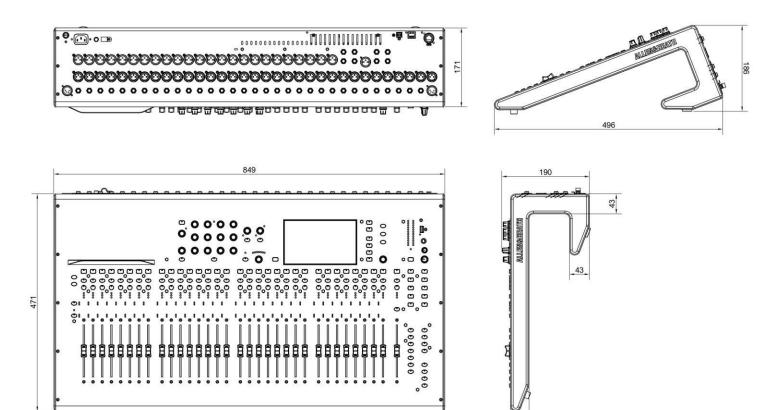
- 38 In / 28 Out Digital Mixer
- 7" colour touchscreen'
- 32 Mono Inputs (TRS + XLR)
- 33 Motor Faders
- 3 Stereo Inputs (TRS)
- 4 stereo FX with dedicated Sends and Returns
- 24 Mix Outputs (XLR)
- 4 Stereo Groups
- 2 Stereo Matrix Outs
- 10 SoftKeys
- Extra stereo outputs AES digital, Alt Out, 2TRK out
- Talkback mic input
- dSNAKE Cat5 snake for remote audio using AR2412, AR84 or AB168
- 4 Mute Groups
- 4 DCA Groups
- AnaLOGIQ™ total recall analogue preamps
- Effects ported from the flagship iLive console
- Dedicated stereo FX return channels
- Master strip for quick access to mix levels and processing
- Input channel linking for stereo sources
- Input processing Preamp, HPF, Gate, PEQ, Compressor, Delay
- Automatic Mic Mixing

- Output processing PEQ, Graphic EQ, Compressor, Delay
- 31 Band Real Time Analysis and Spectrogram
- 7" (800x480 pixel) colour touch screen for quick control
- Motorised faders for sends on faders, GEQ fader flip and mix recall
- Quick copy and reset of processing, mixes and scenes
- 100 Scene memories
- Channel Safes, Global and per Scene Recall Filters
- FX, processing and channel User Libraries
- Qu-Drive for stereo and 18-track recording/playback to USB hard drive
- USB streaming to/from an Apple® Mac or Windows™ PC computer
- MIDI DAW Control driver for Mac (converts to HUI or Mackie Control)
- USB transfer of Scenes, Libraries, Shows
- User assignable Custom Layer
- · Qu-Pad engineer's mixing wireless remote app for iPad
- Qu-You personal monitoring app for iPhone, iPad, iPod Touch
- Compatible with the Allen & Heath ME personal mixing system
- User Permissions to restrict operator access
- Optimised fan-less airflow design for silent operation





Dimensions



A&E Specifications

The mixer shall be a desktop digital mixer with 32 mono and 3 stereo input channels mixing to 24 mix outputs.

The surface shall include 33 moving faders with 3 layers, each layer having dedicated keys and indicators, giving access to input channels, output channel mixes, FX sends, FX returns, Main mix, DCA masters, and a customisable layer giving access to MIDI control as well as user-defined overview of channels.

Each fader strip shall have a dedicated PAFL, Mix, Select, and Mute button with indicators, a 3-LED multi-point meter, and coloured LED indicating fader assignment.

The mixer shall have a physical control per function following the select button for the input and output channels allowing for fast access to all key processing parameters. The fader and rotary controls shall be of a high contrast colour to the mixer surface for excellent visibility during operation in low light conditions

Ability to assign channel on/off status to the current mix using the channel 'Mix' keys shall be provided.

All processing, Pre/Post fade routing and assignments of signals to mix send, FX send and Audio, DCA and Mute Groups shall be accessed and adjusted via a 7-inch colour touchscreen provided on the mixing surface.

A Channel Ducker shall be provided to reduce the level of selected channels when a designated channel is in use. This channel priority shall be available across all mono and stereo input channels and also channel groups.

An Automatic Mic Mixer shall be provided for automatic level control of up to 16 microphones using a constant gain

sharing algorithm to dynamically adjust the gain for each mic in spoken word applications

10 user-assignable soft keys shall be provided for quick access to Mute Groups, DCA Mutes, Tap Tempo and Scene Recall. There shall also be dedicated keys for quick Copy/Paste/Reset of mixes and processing parameters. The name and number of the current selected channel or mix shall be identified on screen when in the processing or routing pages.

Send levels to mixes shall be displayed and adjusted using the faders.

4 Stereo Audio Groups shall be available for sub mixing and the combined processing of selected input channels. These Audio Groups shall be switchable to function as additional Send Mixes when required.

All output mix channels shall contain the following processing: External input, Trim, Polarity, Insert, Parametric EQ, and Graphic EQ with RTA and fader-flip mode, Compressor, Delay.

All signal delays in the system shall be adjustable in Milliseconds.

There shall be 4 stereo rack FX engines, 4 DCA groups and 4 Mute groups.

4 user-assignable effect racks shall be provided with a library of factory preset FX emulations. The FX racks shall be individually configurable as send/return from a channel or FX/Mix, or inserted into input or output channels.

A global source option for the direct out of each input channel shall be provided in the routing screen. The tap-off point shall be adjusted to the following positions in the processing path: post Preamp, post HPF, post Gate, post Insert return, post PEQ, post Compressor, and post Delay. There shall be further global options for Follow Fader, and Follow Mute.

Direct outputs shall be assignable via the mixer soft patch bay to any physical output socket interface channel or ME channel.

A signal generator shall be provided with the ability to send a variable level signal to any output mix with visual assignment status on-screen. The following types of signals shall be available: Sine, White Noise, Pink Noise, and Band-Pass. Comprehensive input, output, and FX channel and RTA metering shall be provided on-screen.

Real Time Analysis metering shall include a spectrogram to allow for accurate monitoring of audio energy across the frequency spectrum over time for the purpose of feedback detection and correction of room acoustics.

A default Mains to PAFL sub-mix shall be provided. 12-LED bar meters on the surface shall indicate the 3 Main mix buss levels, the PAFL signal shall override the LR meters accompanied by a PAFL-active indicator.

A Talkback facility shall be provided with the ability to send to any output mix with on screen status indication. An option to enable talkback latching and HPF shall be provided.

A quarter-inch jack socket for PAFL headphones output shall be provided, with an analogue output level control.

The mixer shall include stereo and 18-track recording/playback to optional USB hard drives. The format shall be 48 kHz/ 16 bit WAV.

The mixer shall play back stereo WAV files at 44.1 or 48 kHz and shall have a USB Type-A connector on the surface for recording, playback, data-transfer, archiving, and firmware updates to USB drive.

On the rear panel there shall be a Type-B USB connection following the high-speed USB 2.0 standard for multi-channel, bi-directional audio streaming of 32 out / 32 in and MIDI DAW control between the mixer and a computer.

A DAW transport control using popular DAW control protocols for computer shall be available via the touch-screen.

The mixer shall provide a Fast Ethernet (100 Mbit/s) port for Cat5 cable connection to a computer for MIDI over TCP/IP control of mixer parameters via a wireless router (access point) for live mixing control.

The mixing system shall include application software for Apple iOS touchscreen devices connected via a wireless network router to the LAN port and allow control of functions including the preamp gain, pad, and phantom power. The application shall have a graphical representation of physical controls and indicators present on the surface including signal processing parameters and shall provide control of output channel processing including Parametric EQ, Graphic Eq, Compressor and Delay. Routing assignments and level adjustments of input signals to all mixes and bus shall be provided. The application software shall provide signal metering and processing threshold indication when online including the Real Time Analyser. There shall be a local "dSNAKE" Ethernet audio expansion port with locking Ethercon connector, providing up to 38 input signals and 20 output signals, plus 40 personal mixing sends to be connected over a single cable 'digital snake' and allowing Remote Preamp control to an Allen & Heath AudioRack, or Allen & Heath ME Personal Mixing Systems. Input and output channel processing and parameters in the mixer shall be saved on demand as a user library item for recall in other channels. Individual processing sections shall be save-able on demand as user library items for that type. All library items shall be stored on board and archived with the show-file. Library items shall be transferrable to USB drive as portable data to be used in other systems. The mixer shall provide the facility to save 100 scenes of the settings of the mixing system and these scenes shall be

nameable.
A comprehensive table of Scene Safes shall be provided to prevent selected items from being changed from their state when the safe was enabled. A comprehensive scene filter shall be provided per scene to Allow / Block each parameter saved in a scene from being changed as that scene is recalled.

An option shall be provided for password protection for log-in of several users with different levels of system access and permissions. A particular scene may be chosen to be recalled per change of user-login if desired.

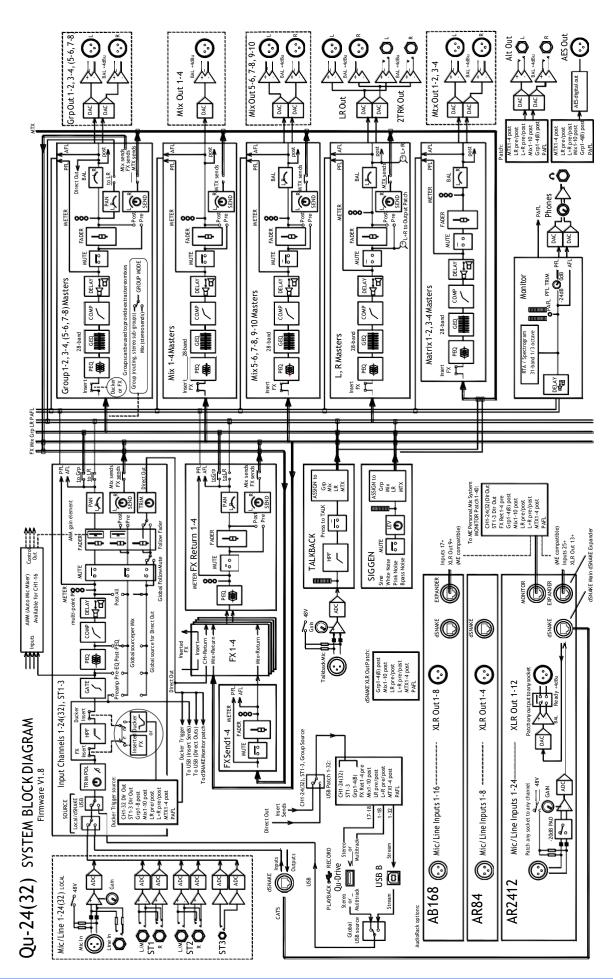
The mixing system shall periodically record all current settings and return the mixer to that state after reboot following a power-cycle.

The mixing control surface shall have a built in power supply accepting AC mains voltages of 100~240V, 50/60 Hz, 95W max via an earthed 3-pin IEC male connector mounted on the rear chassis. A Two Pole Push-Button switch shall be provided near the mains input.

The mixer shall have an optimised fan-less airflow design for silent operation

Recommended operating temperature for the mixer shall be 5 to 35 degrees Celsius.

The mixer shall be the Allen&Heath Qu-32 Digital Mixer.



Mixer Specifications

MickLine inputs Faders F	Inputs		Control	
April 5 Apri	iliputs	Balanced, XLR and 1/4" TRS jack, fully	Control	
Analogue Gain Analogue Gai	•			
Mate Groups	. ,			•
TRS	9	-5 to +60dB, 1dB steps	SortKeys	10
THD-HA. Unity gain odds		+19dBu / +29dBu	Mute Groups	4
17-11-1-1-1, Mid gain +30/8B 20-20/Hz, Direct Out @06/8Bu 18-Hz) 160/915-8-38-Bit 20-20/Hz, Direct Out @06/8Bu 18-Hz) 160/915-8-38-Bit 20-20/Hz, Direct Out @06/8Bu 18-Hz) 160/915-8-Bit 20-20/Hz, Direct Out @06/8Bu 18-Hz) 160/915-8-Bit 20-20/Hz, Direct Out @06/8Bu 18-Hz) 160/915-8-Bit 20-20/Hz, ST3 160/915-8-Bit 20-20/Hz,	Input Impedance (XLR / TRS)	>5kΩ / >10 kΩ	DCA Groups	4
THOP-N, Mid gain + 300B	THD+N, Unity gain 0dB		Network	TCP/IP Ethernet for MIDI and iPad app
Stereo Line Inputs Input Processing Input Processing Input Sensitivity (ST1, ST2/ST3) Cotal, dSNAKE, or USB ST1, ST2 connector Nominal +4dBu / 0dBu + 4dBu / 0dBu + 4dBu / 2dBu / 148dBu ST1, ST2 ST3 Local, dSNAKE, or USB Stereo Local, dSNAKE, or USB Stereo Maximum Input Level (ST1, ST2/ST3) 422dBu / +18dBu ST1, ST2 ST3 Local, dSNAKE, or USB Stereo Local, dSNAKE, or USB Stereo Maximum Input Level (ST1, ST2/ST3) Odd/even input pairs ECQ, dynamics, insent, delay, assignment, delay, assignment, delay, assignment, delay, assignment, sends, preamp, polarity, sidechains, fade/induced property, sidechains, fad	THD+N, Mid gain +30dB	,		
ST3 connector Salanced, 1/4* TRS jack, half normalled Source Salanced, 1/4* TRS jack, half normalled Salanced, 1/4* Salanced Salanced,		(20-20kHz, Direct Out @0dBu 1kHz)		
ST3 connector Unbalanced, stere 0.3.5mm Mini Jack CH13:22 Local, dSNAKE, or USB Input Sensitivity (ST1, ST2) ST3 Local, dSNAKE, or USB ST6 ST3 Local, dSNAKE, or USB ST6 ST3 Local, dSNAKE, or USB ST6 ST7 ST3 Local, dSNAKE, or USB ST6 ST7 ST7 ST7 ST7 Local, dSNAKE, or USB ST7 ST7 ST7 Local, dSNAKE, or USB ST6 ST7	•			
	•	•		Local JONAKE CALIDE
ST3		Undalanced, stereo 3.5mm Mini Jack	CH1-32	Local, dSNAKE, or USB
Maximum Input Level (ST1.ST2 ST33) + 22dBu / + 18dBu + 18dB		Nominal +4dBu / 0dBu	ST1, ST2	Local, dSNAKE, or USB
ST1.572 / ST3 +22.08bu / +18.08bu VSB Global Source Qu-Drive or USB B Streaming		+/-24dB	ST3	Local, dSNAKE, or USB Stereo
Outputs Stereo Linking Odd/even input pairs Outputs Coutputs Parameters linked Odd/even input pairs EQ. dynamics, isnet, delay, assignments, sends Mix1-10 and LR Out Balanced, XLR Link options Team, polarity, sidechains, fader/mute, pair Group and Matrix Out Output Impedance <75Ω High Pass Filter 12dB/octave 20Hz − 2HHz Nominal Output +4dBu = 0dB meter reading Polarity Normal/Reverse Residual Output Noise 90 dBu (muted, 20-20kHz) Gate Self-key Sidechain Stereo Alt Out & 2Trk Out Source (Alf Output / 2Trk Output Patchable / LR post-fade Attack / Hold / Release 50us to 300ms / 10ms to 5s / 10ms to 1s Nominal Output Impedance +4dBu = 0dB meter reading PEQ 4-Band fully parametric, 20-20kHz, +/-15dB Residual Output Noise 90 dBu (muted, 20-20kHz) Band 1 Selectable IF Shelving (Baxandall), Bell Ball AES Digital Output 2 channel, 48kHz sampling rate, XLR 2.5Vpp balanced terminated 1100 Band 2 Band 3 Bell Width dSNAKE Compatible with MusioRacks AR2412, AR84, A8168 Compatible with MusioRacks AR2412, AR84, A8168 AR84 Carbable from Mix1-10, LR, Grp1-8, MTX1-4 <td></td> <td>, 224D., / , 404D.,</td> <td>LICD Clobal Course</td> <td>Ou Drive or LICE B Streeming</td>		, 224D., / , 404D.,	LICD Clobal Course	Ou Drive or LICE B Streeming
Outputs Mixt-10 and LR Out Balanced, XLR Link options Balanced, XLR Link options Preamproplarity, sidechains, fedely, assignments, sends Preamproplarity, sidechains, feder/mute, pan Polarity Normal/Reverse High Pass Filter 12dB/octave 20Hz - 2kHz Insert 12dB/octave 20Hz			USB Global Source	Qu-Drive of USB B Streaming
Outputs Balanced, XLR Parameters linked Preampters linked Preampters linked Preampters polarity, sidechains, fader/mute, pan assignments, sends Preampters linked Preampt, polarity, sidechains, fader/mute, pan Group and Matrix Out Output Impedance Nominal Output 1 with	input impedance	~1 N22	Stereo Linking	
Group and Matrix Out Group and Matrix Out Cutput Impedance C75\Omega	Outputs		Parameters linked	
Polarity Normal/Revrse Coutput Impedance 475Ω High Pass Filter 12dB/octave 20Hz – 2kHz 12dB/octave 20Hz – 2kHz 12dB/octave 20Hz – 2kHz 18set 18se		5.11.24.5	11.1	
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Maximum Output Level +22dBu Delay Up to 85ms Residual Output Noise -90 dBu (muted, 20-20kHz) Gate Self-key Sidechain Stereo Alt Out & 2Trk Out Source (Alt Output / 2Trk Output) Balanced, 1/4" TRS jack Attack / Hold / Release 50us to 300ms / 10ms to 5s / 10ms to 1s Output Impedance -750 4-Band fully parametric, 20-20kHz, +/-15dB Nominal Output Level +22dBu Band 1 Selectable LF Shelving (Baxandall), Bell Non-constant Q, variable, 1.5 to 1/9th octave Residual Output Noise -90 dBu (muted, 20-20kHz) Band 2, Band 3 Bell Width Selectable HF Shelving (Baxandall), Bell Non-constant Q, variable, 1.5 to 1/9th octave AES Digital Output 2 channel, 48kHz sampling rate, XLR 2.5Vpb balanced terminated 110Ω Self-key Sidechain dSNAKE Remote source for CH1-32, ST1, ST2, ST3 Threshold / Ratio -46dBu to 18dBu / 1:1 to infinity Outputs Remote source for CH1-32, ST1, ST2, ST3, ST2, AR84, AB168 Attack / Release 300us – 300ms / 100ms - 2s Compatible with Mc personal mixing system Measured balanced XLR in to XLR out, odd gain, odBu input Mix Processing Follow Fader, follow Mute (global options) Frequency Response +18dB OdB meter = -18dBFS (+22dBu at XLR out) </td <td>Output Impedance</td> <td><75Ω</td> <td>High Pass Filter</td> <td>12dB/octave 20Hz – 2kHz</td>	Output Impedance	<75Ω	High Pass Filter	12dB/octave 20Hz – 2kHz
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Stereo Alt Out & 2Trk Out Source (Alt Output / 2Trk Output)Balanced, 1/4" TRS jackThreshold / Depth-72dBu to +18dBu / 0 to 60dBOutput ImpedancePatchable / LR post-fade <75Ω	Residual Output Noise	-90 dBu (muted, 20-20kHz)		
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Output Impedance		Balanced, 1/4 Tho Jack	Threshold / Depth	-72dBd to +70dBd / 0 to 00dB
Nominal Output Level		Patchable / LR post-fade	Attack / Hold / Release	50us to 300ms / 10ms to 5s / 10ms to 1s
Nominal Output	Output Impedance	<75Ω		45 44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
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AR84, AB168 Compatible with ME personal mixing system Measured balanced XLR in to XLR out, OdB gain, OdBu input Dynamic Range 112 dB Mix Processing Channel Direct Out to USB Frequency Response +0/-0.5dB 20Hz to 20kHz Headroom Internal operating Level dBFS Alignment Mix Processing Channel Direct Out to USB Source select (global) Insert Assign FX into Mix channels Mix Processing Channel Direct Out to USB Post-Preamp, Pre-EQ, Post-EQ, Post-Delay Insert Assign FX into Mix channels Delay Up to 170ms	σαιραισ		ALIAUN / INCIDASE	
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	IVICIO CANDIALION	•	Delay	op to 17 onis
	Meter Peak indication			

Constant 1/3 oct, 28 bands 31Hz-16kHz, +/-12dB Gain Meter Signal indication -48dBFS (-26dBu at XLR out) GFO Meter Type Fast (peak) response 4-Band fully parametric, 20-20kHz, +/-**PEQ** Sampling Rate 48kHz +/-100PPM Band 1 Selectable LF Shelving (Baxandall), Bell ADC, DAC 24-bit Delta-Sigma Band 2, Band 3 Selectable HF Shelving (Baxandall), Bell Latency 1.2 ms (local XLR in to XLR out) Band 4 Non-constant Q, variable, 1.5 to 1/9th 0.7 ms (local XLR in to AES out) Bell Width octave 0 deg C to 35 deg C (32 deg F to 95 Operating Temperature Range Compressor Self-key Sidechain deg F) Mains Power 100-240V AC, 50/60Hz Threshold / Ratio -46dBu to 18dBu / 1:1 to infinity Maximum Power Consumption 150W Attack / Release 300us - 300ms / 100ms - 2s Knee Soft/Hard Peak Manual, RMS Manual, SlowOpto, **USB** Audio Types PunchBag **Qu-Drive** USB A 2 channel, WAV, 48kHz, 24-bit, Stereo Record patchable 2 channel, WAV, 44.1 or 48kHz, 16 or Stereo Playback FΧ 24-bit, to ST3 18 channel, WAV, 48kHz, 24-bit, 4x RackFX engine, Send>Return or Internal FX Multitrack Record patchable Inserted Multitrack Playback 18 channel, WAV, 48kHz, 24-bit **Audio Tools USB Audio Streaming** Reverbs, Delays, Gated Reverb, ADT USB B, Core Audio compliant Types Chorus, Symphonic Chorus, Phaser,

4 dedicated Stereo FX Return (downstream) 32 channel, WAV, 48kHz, 24-bit Fader, Pan, Mute, Routing to Mix/LR, 4-returns Band PEQ

32 channel, WAV, 48kHz, 24-bit

PFL or stereo in-place AFL, 0 to -24dB **Dimensions & Weights PAFL** Trim, 85ms Delay Width x Depth x Height Talkback Assignable to any mix, 12dB/oct HPF 850 x 500 x 186 mm (33.5"" x 19.7" x Assignable to any mix, Sine / Desk mounted Signal Generator White/Pink/Band-pass Noise 1000 x 680 x 350 mm (39.4" x 26.8" x 31-Bands 1/3 octave 20-20kHz, follows RTA Packed in shipping box 13.8") PAFL source

Unpacked weight 20 kg (44 lbs)
Packed weight 24 kg (53 lbs)

Send (upstream)