



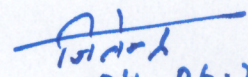
PRASAR BHARATI
(India's Public Service Broadcaster)
New Broadcasting House, Akashvani Delhi
New Delhi-110001.

No. J-16026/57/2026-ENGG - AIR DELHI

Dated: 04/06/2026

Subject: Draft Technical Specifications for Supply of Audio Recording and Production Equipment at Akashvani, Delhi for seeking Vendors/OEMs Feedback and Budgetary Quote.

1. Technical Specifications for supply of Computer, Tablet Computer, Audio Interface, USB Sound Card, Hand-held Recorder, Field Recorder and Headphone Distribution Amplifier for Akashvani, Delhi are being uploaded to invite feedback from Vendors/OEMs dealing with supply of such equipment. Interested parties are requested to provide their comments/feedback on these technical specifications.
2. The budgetary prices of the offered equipment/items may also be submitted.
3. The above information may be provided by e-mail to ddgenbh@prasarbharati.gov.in and enggstorenbh@gmail.com on or before 20/06/2026.


04.06.2026

(JITENDER PRUTHI)
Dy. Director General (E)

Bill of Quantity:

Item Number	Item Title	Item Description	Item Quantity	Unit of Measure
1	Computer	Computer	1	No
2	Tablet Computer	Tablet computer for use as Light Control and Audio Interface control	1	No
3	Audio Interface for Multi-Track Recording	Audio Interface for Multi-track Recording	1	Nos
4	USB Sound card	USB based Sound Card for use with Laptops during OB	4	Nos
5	Hand-held Recorder	2 Channel hand Held Recorder with built-in Mikes	5	Nos
6	Field recorder	2 Channel Field Recorder	2	Nos
7	Headphone Distribution Amplifier	1 Input to 8 Stereo Headphone Distribution Amplifier	5	Nos

Specifications:

1. Computer

S.No.	Parameter	Value / Description
A	PROCESSOR	
1	Chip	Apple M4 Pro or equivalent
2	CPU Cores	Minimum 12-core CPU (8 Performance Cores + 4 Efficiency Cores)
3	CPU Speed	Up to 4.5 GHz or higher
4	GPU Cores	Minimum 16-core GPU, configurable to 20-core or higher
5	Neural Engine	Minimum 16-core Neural Engine
B	MEMORY & STORAGE	
6	Unified Memory	Minimum 24 GB LPDDR5X Unified Memory (256-bit, 8533 MHz or better)
7	Storage	Minimum 1 TB SSD
C	DISPLAY SUPPORT	
8	Maximum Simultaneous Displays	Support for minimum 3 displays simultaneously
9	Thunderbolt	Thunderbolt 5 interface with data transfer rate up to 120 Gb/s
10	Maximum Thunderbolt Resolution	Up to 6K resolution at 60 Hz
11	HDMI Output	Up to 8K at 60 Hz or 4K at 240 Hz
12	DisplayPort	Native DisplayPort 2.1 support over USB-C/Thunderbolt

D	CONNECTIVITY	
13	Front Ports	Minimum 2 × USB-C (USB 3, 10 Gb/s) ports and 1 × 3.5 mm headphone jack
14	Ethernet	Gigabit Ethernet; configurable to 10 Gigabit Ethernet
15	Wi-Fi	Wi-Fi 6E (802.11ax) or higher
16	Bluetooth	Bluetooth 5.3 or higher
E	AUDIO	
17	Speaker	Built-in speaker
18	Headphone Jack	3.5 mm headphone jack with support for high-impedance headphones
19	Audio Formats	Support for AAC, MP3, Apple Lossless, FLAC, Dolby Digital and Dolby Atmos formats
F	POWER & ENVIRONMENT	
20	Input Voltage	100–240 V AC, 50–60 Hz
21	Maximum Continuous Power	Maximum 155 W or better
22	Operating Temperature	10°C to 35°C (50°F to 95°F)
G	SOFTWARE	
23	Operating System	Latest stable version of macOS pre-installed
H	MEDIA ENGINE	
24	Video Encode/Decode	Hardware-accelerated H.264, HEVC, ProRes, ProRes RAW and AV1 encoding/decoding
25	HDR Support	Dolby Vision, HDR10+, HDR10 and HLG
I	IN THE BOX	
26	Included Accessories	Desktop Computer, Power Cord (minimum 1.8 m), Wireless Keyboard and Wireless Mouse
27	Warranty	Minimum 03 Years Comprehensive OEM Warranty

2. Tablet Computer

S.No.	Parameter	Value / Description
A	PROCESSOR / CHIP	
1	Chip	Apple A17 Pro or equivalent
2	CPU Cores	6-core CPU (2 Performance Cores + 4 Efficiency Cores)
3	CPU Speed	Up to 3.78 GHz (Performance Core), 2.11 GHz (efficiency)
4	GPU Cores	Minimum 5-core integrated GPU or equivalent
5	Neural Engine	Minimum 16-core Neural Engine(2× faster than previous gen)
6	Process Node	3 nm or better (TSMC N3)
7	RAM	Minimum 8 GB LPDDR5
8	Hardware Ray Tracing	Supported (4× faster than software)

9	AI Processing	Support for on-device AI processing / Apple Intelligence or equivalent
B	DISPLAY	
10	Display Type	Liquid Retina / IPS Multi-Touch Display
11	Screen Size	Minimum 8.3-inch diagonal
12	Resolution	Minimum 2266 × 1488 pixels at 326 ppi
13	Color Gamut	Wide Color (P3) or better
14	Brightness	Minimum 500 nits
15	Display Features	True Tone, Fully Laminated Display, Anti-Reflective and Fingerprint-Resistant Coating, Oleo phobic coating
16	Stylus Support	Compatible with active stylus / digital pencil, Apple Pencil Pro, Apple Pencil (USB-C), Apple Pencil hover
C	STORAGE	
17	Storage Capacity	Minimum 128 GB
18	Storage Type	NVMe SSD or equivalent
D	REAR CAMERA	
19	Sensor	Minimum 12 MP Wide Camera, f/1.8 aperture
20	Lens	Five-element lens or better
21	Autofocus	Supported Focus Pixels
22	Flash	True Tone Flash or equivalent
23	HDR	Smart HDR 4 or equivalent
24	Panorama	Up to 63 MP or better
25	Video Recording	4K at 24/25/30/60 fps; Slo-mo 1080p at 120/240 fps 1080p HD recording,
26	Video Stabilization	Cinematic / Electronic Image Stabilization supported (4K, 1080p, 720p)
27	Image Formats	HEIF, JPEG or equivalent
28	Video Formats	HEVC, H.264 or equivalent
E	FRONT CAMERA	
29	Sensor	Minimum 12 MP Ultra-Wide Camera f/2.4 aperture
30	Features	Center Stage, Smart HDR 4 and Retina Flash or equivalent
31	Video Recording	1080p HD video recording up to 60 fps
F	CONNECTIVITY & WIRELESS	
32	Wi-Fi	Wi-Fi 6E (802.11ax) with 2×2 MIMO, dual band or higher
33	Bluetooth	Bluetooth 5.3 or higher
34	USB Port	USB-C with USB 3 (up to 10 Gb/s), DisplayPort and Charging support
35	Charging Speed	Minimum 20W Fast Charging (adapter included)
G	AUDIO	
36	Speakers	Landscape Stereo Speakers
37	Microphones	Minimum Dual Microphones
38	Audio Formats	AAC, MP3, FLAC, Apple Lossless, Dolby Atmos and Dolby Digital
H	SENSORS &	

	SECURITY	
39	Biometrics	Touch ID / Fingerprint Authentication
40	Sensors	3-axis Gyroscope, Accelerometer, Barometer, Ambient Light Sensor and Digital Compass
I	BATTERY & POWER	
41	Battery Capacity	Minimum 19.3 Wh Lithium-Polymer Battery
42	Battery Life (Wi-Fi)	Up to 10 Hours Web Browsing / Video Playback
43	Charging	USB-C Power Adapter Included
J	SOFTWARE & OS	
44	Operating System	Latest stable version of iPadOS or OEM-supported operating system, upgradable to latest available version
K	WARRANTY	
45	Warranty	Minimum 03 Years Comprehensive OEM Warranty

3. Audio Interface for Multi-track recording

S.No.	Parameter	Value / Description
1	Type	Rackmount 18-In / 20-Out USB-C Audio & MIDI Interface
2	Form Factor	1U Rack Mount (19" standard rack compatible)
3	Total Inputs	18 channels
4	Total Outputs	20 channels
5	Mic/Line Preamps	8 × Mic/Line Inputs on XLR/TRS Combo Connectors
6	Instrument (Hi-Z) Inputs	2 × JFET or Equivalent Hi-Z Inputs
7	Phantom Power	48 V (switchable: Ch 1–4 & Ch 5–8)
8	Mic Input EIN	–129 dBu (A-weighted)
9	Mic Input Gain Range	0 to +57 dB
10	Mic Max Input Level	+18 dBu (at minimum gain)
11	Mic Input Dynamic Range (A-D)	118 dB (A-weighted)
12	Mic Input THD+N	–110 dB (0.0003%) at –1 dBFS, +20 dB gain
13	Mic Frequency Response	20 Hz–20 kHz: ±<0.03 dB; 20–35 kHz: ±<0.15 dB
14	Line Inputs	8 × via Combo XLR/TRS (shared with mic inputs)
15	Line Input Max Level	+26 dBu (at minimum gain)
16	Line Input Dynamic Range	118 dB (A-weighted)
17	Line Input THD+N	–100 dB (at –1 dBFS, minimum gain)
18	Instrument Input Dynamic Range	116 dB (A-weighted)
19	Instrument Input Max Level	+15 dBu
20	Monitor Outputs	2 × Balanced ¼" TRS
21	Line Outputs	8 × Balanced ¼" TRS
22	Line/Monitor Output Dynamic Range (D-A)	124 dB (A-weighted)
23	Line/Monitor Max Output	+18 dBu (0 dBFS)

	Level	
24	Line Output THD+N	-106 dB
25	Headphone Outputs	2 × ¼" TRS (front panel, independent volume controls)
26	Headphone Max Output Level	+15 dBu
27	Headphone Dynamic Range	115 dB (A-weighted)
28	Headphone THD+N	0.0009%
29	ADAT Input	1 × Optical – 8 ch @ 44.1/48 kHz; 4 ch @ 88.2/96 kHz
30	ADAT Output	1 × Optical – 8 ch @ 44.1/48 kHz; 4 ch @ 88.2/96 kHz
31	S/PDIF I/O	1 × Coaxial RCA In / 1 × Coaxial RCA Out
32	MIDI I/O	1 × 5-pin DIN MIDI In / 1 × 5-pin DIN MIDI Out
33	USB Connectivity	USB-C and USB-A (both cables included)
34	OS Compatibility	macOS, Windows, iPadOS
35	A/D Conversion	24-bit / 192 kHz
36	D/A Conversion	24-bit / 192 kHz
37	Supported Sample Rates	44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz
38	Metering	10 × 6-segment LED meters (8 preamps + 2 monitor)
39	Monitor Controls	DIM (-18 dB) / MUTE buttons with status LEDs
40	Control Software	Necessary software for control of interface on Mac / Windows / iOS / iPadOS should be provided
41	Power Supply	Internal switch-mode PSU – AC 100–240 V (IEC inlet)
42	Accessories	Necessary USB cables, documentation and accessories required for operation shall be supplied
43	Bundled Software	Basic software for Multi-track Recording should be included
44	Warranty	3 Years

4. USB Sound card

S.No.	Parameter	Value / Description
GENERAL / OVERVIEW		
1	Interface Type	USB-C Audio & MIDI Interface
2	Input / Output Channels	2-in / 2-out (Analog)
3	USB Recording / Playback	Minimum 2-track Recording and 2-track Playback
4	DSP Processing	In-built DSP Processing for Monitoring and Effects
5	Housing	Sturdy Metal Chassis
AUDIO PERFORMANCE		
6	Bit Depth (USB to	32-bit Integer or Better

	Host)	
7	Sampling Frequency Rate	44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz
8	Frequency Response	20 Hz to 22 kHz, ± 0.4 dB or Better
9	THD (Mic/Line/Hi-Z Input)	$\leq 0.003\%$ @ 1 kHz, 22 Hz/22 kHz BPF
10	THD (Main Output)	$\leq 0.002\%$ @ 1 kHz, 22 Hz/22 kHz BPF
11	Dynamic Range (Mic/Line/Hi-Z)	Minimum 102 dB
12	Dynamic Range (Main Output)	Minimum 105 dB
13	Preamp Gain Range	Minimum 54 dB
MICROPHONE PREAMPS		
14	Preamp Type	Class-A Discrete Microphone Preamplicifier or Equivalent
15	Number of Preamps	Minimum 2
16	Phantom Power	+48 V Switchable
17	Hi-Z Instrument Input	Minimum 2 Dedicated Hi-Z Instrument Inputs
I/O CONNECTORS		
18	Analog Inputs	2 \times Combo XLR / 6.3 mm Jack Inputs (Mic/Line) with Hi-Z support on both inputs
19	Analog Outputs	2 \times Balanced TRS (6.3 mm) Line Outputs
20	Headphone Output	1 \times 6.3 mm Headphone Output with Independent Level Control
21	USB to Host	1 \times USB Type-C (32-bit)
22	Power Input	USB Bus Powered and/or Dedicated DC Power Input
23	MIDI	1 \times MIDI IN and 1 \times MIDI OUT (5-pin DIN)
USB CONNECTIVITY		
24	USB Standard	USB 3.0 / USB 3.1 Gen 1 or Better
25	Connector Type (Host Side)	USB Type-C
26	Driver Support	Necessary ASIO, WDM and Core Audio Drivers shall be provided
27	iOS / iPad Connectivity	Supported (via USB-C)
DSP & MONITORING		

28	Direct Monitoring	DSP-powered Low-Latency / Zero-Latency Monitoring
29	DSP Effects	Reverb, Channel Strip (EQ & Compression), Guitar Amp Simulation and Pitch Correction or Equivalent Effects Suite
CONTROLS & USER INTERFACE		
30	Control Knobs / Switches	Necessary Controls for Input Gain, Monitor Mix, Main Output Level, Headphone Level, Phantom Power and Monitoring Functions shall be provided
POWER REQUIREMENTS		
31	Power Supply Voltage	DC 5 V or Equivalent
32	Power Consumption	Maximum 5 W
33	Power Source Options	USB Bus Power and/or External DC Power Input
OS COMPATIBILITY		
34	Windows Compatibility	Windows 10 / 11 or Later
35	macOS Compatibility	macOS 12 Monterey or later — Core Audio
36	iOS / iPadOS Compatibility	iOS 16 / iPadOS 16 or later (USB-C direct)
BUNDLED SOFTWARE		
37	Bundled Software	Basic DAW Software for Windows/macOS and Necessary DSP Effects Suite shall be included
38	Warranty	Minimum 03 Years

5. Hand-held Recorder

S.No.	Parameter	Value / Description
1	Type	2-Channel Portable Handheld Recorder & USB Audio Interface
2	Recording Media	microSD (64 MB–3 GB) / microSDHC (4–32 GB) / microSDXC (up to 128 GB)
3	File System	FAT16, FAT32, exFAT
4	Recording Format	WAV/BWF, MP3
5	WAV Sampling Frequency	44.1 kHz / 48 kHz / 96 kHz
6	WAV Bit Depth	16-bit / 24-bit

7	MP3 Sampling Frequency	44.1 kHz / 48 kHz
8	MP3 Bit Rate (Recording)	32 / 64 / 96 / 128 / 192 / 256 / 320 kbps
9	MP3 Playback Bit Rate	32–320 kbps, VBR, ID3 Tag Ver. 2.4
10	Number of Channels	2-Channel (Stereo) / 1-Channel (Mono)
11	Built-in Microphone	Unidirectional Stereo Condenser Microphone (A-B / X-Y Switchable)
12	Maximum SPL (Built-in Mic)	125 dB SPL
13	External Input Connector	3.5 mm Stereo Mini Jack, Unbalanced, Plug-in Power Supported
14	Nominal Input Level	–20 dBV
15	Maximum Input Level	–4 dBV
16	Input Impedance	≥18 k Ω (Plug-in Power OFF) / ≥2 k Ω (Plug-in Power ON)
17	Output Connector (Headphone/Line)	3.5 mm Stereo Mini Jack, Unbalanced
18	Nominal Output Level (Line)	–14 dBV (10 k Ω Load)
19	Maximum Output Level (Line)	+2 dBV (10 k Ω Load)
20	Output Impedance	12 Ω
21	Headphone Maximum Output Power	20 mW + 20 mW (32 Ω Load)
22	USB Connector	Micro USB Type-B or higher
23	USB Standard	USB 2.0 High Speed
24	USB Modes	Mass Storage / Audio Interface (44.1 kHz, 48 kHz)
25	USB Compatibility	Windows, macOS and iOS/iPadOS Compatible
26	Built-in Speaker	0.3 W, Mono
27	Low-Cut Filter	40 Hz / 80 Hz / 120 Hz
28	Playback Speed Control (VSA)	0.5 \times to 2.0 \times (0.1 \times Increments)
29	Reverb Effect	6 Presets: Hall 1, Hall 2, Room, Studio, Plate 1, Plate 2
30	Frequency Response (44.1 kHz)	20 Hz–20 kHz, +0/–1 dB
31	Frequency Response (48 kHz)	20 Hz–22 kHz, +0/–1 dB
32	Frequency Response (96 kHz)	20 Hz–40 kHz, +0/–1.5 dB
33	Total Harmonic Distortion (THD)	0.01% or Less
34	Signal-to-Noise Ratio (SNR)	94 dB or Higher
35	Pre-Recording Buffer	Up to 2 Seconds
36	Auto Recording	Sound-Level Triggered Auto Recording
37	Overdub Recording	Supported (Non-Destructive Recording)
38	Overwrite / Punch-In Recording	Supported with One-Level Undo Function
39	Display	Graphic LCD Display with Backlight
40	Menu Language	English
41	Power Supply	2 \times AA Batteries / USB Bus Power / Optional AC Adapter
42	Power Consumption	Less than 2 W (Maximum)

43	Battery Life (Alkaline Batteries)	Approximately 17.5 Hours (2-Channel WAV, 44.1 kHz, 16-bit Recording)
44	Maximum Recording Time (128 GB Card)	Approximately 192 Hours (WAV) / 896 Hours (MP3 320 kbps)
45	Dimensions	Compact and Suitable for Handheld Operation
46	Weight	Lightweight and Suitable for Handheld Operation
47	Accessories	USB Cable, Batteries and Necessary Accessories Required for Operation Shall be Supplied
48	Warranty	Minimum 03 Years

6. Field recorder

S.No.	Parameter	Value / Description
1	Type	Compact 32-bit Float Field Recorder
2	Recording Format	Broadcast WAV (BWF)
3	Bit Depth	32-bit Float / 24-bit Linear
4	Sample Rate	48 kHz / 96 kHz / 192 kHz
5	Number of Channels	2-Channel (Stereo)
6	ADC	Dual ADCs with 32-bit Float No-Clip Recording
7	Analog Inputs	2 × XLR/TRS Combo Inputs (Mic/Line)
8	Preamplifier	High-Quality Low-Noise Microphone Preamplifiers
9	Equivalent Input Noise (EIN)	-127 dBu or Better
10	Phantom Power	24 V / 48 V Switchable
11	Auxiliary Input	3.5 mm Stereo Mini-Jack with Plug-in Power (2.5 V / 5 V)
12	Output	3.5 mm Stereo Mini-Jack with Adjustable Output Level
13	USB Interface	2-In / 2-Out USB Audio Interface via USB-C; Compatible with Windows, macOS and iOS
14	Input Processing	Low-Cut Filter, Compressor, Limiter and Noise Gate
15	Input Delay Adjustment	0–300 ms
16	Output Delay Adjustment	0–300 ms
17	Display	Colour LCD Display
18	Recording Media	microSD / microSDHC / microSDXC Cards (up to 512 GB)
19	Enclosure Material	Sturdy and Durable Construction
20	Dimensions	Compact and Suitable for Carrying to OB Locations
21	Weight (with Batteries)	Less than 300 g
22	Power Supply	Up to 3 × AA Batteries (Alkaline / NiMH / Lithium) and USB Bus Power
23	External Power Adapter	Compatible AC Adapter Shall be Supplied

24	Accessories	USB Cable and Necessary Accessories Required for Operation Shall be Supplied
25	Warranty	Minimum 03 Years

7. Headphone Distribution Amplifier

S.No.	Parameter	Value / Description
1	Type	8-Channel High-Power Headphone Mixing & Distribution Amplifier
2	Application	Professional Stage and Studio Applications
3	Form Factor	1U Rack Mount (19" Standard Rack Compatible)
4	Number of Amplifier Channels	8 (Fully Independent Stereo Channels)
5	Maximum Headphone Connections	16 Pairs
6	Main Inputs	2 × Stereo ¼" TRS Balanced Inputs (L/Mono, R per Pair)
7	Direct Inputs	8 × ¼" Stereo TRS Inputs
8	Main Input Impedance (Balanced)	20 kΩ
9	Main Input Impedance (Unbalanced)	10 kΩ
10	Direct Input Impedance	15 kΩ (Line)
11	Maximum Input Level	+16 dBu
12	CMRR (Common Mode Rejection Ratio)	Greater than 50 dB
13	Headphone Outputs	16 × ¼" TRS Stereo Outputs
14	Main Outputs (Parallel)	2 × Stereo ¼" TRS Outputs for Cascading Multiple Units
15	Maximum Output Level @ 100 Ω	+24 dBm
16	Maximum Output Level @ 8 Ω	+19 dBm
17	Minimum Load Impedance	8 Ω
18	Frequency Response	10 Hz – 150 kHz, ±3 dB
19	THD+N	0.007% Typical @ +4 dBu (1 kHz, Gain = 1)
20	Channel Controls (Per Channel)	Volume Control, Main Input 1/Input 2 Select Switch, Mono/Stereo Switch
21	Metering – Main Input	5-Segment LED Input Meter (Main Section)
22	Metering – Per Channel Output	8-Segment LED Output Level Meter (Per Channel)

23	Mono/Stereo Switch	Provided on Each Channel
24	Main Input Select Switch	Provided on Each Channel (Main In 1 / Main In 2)
25	Power Supply	Switching Power Supply, AC 100–240 V, 50/60 Hz
26	Power Supply Features	Low Noise Operation, Superior Transient Response and Low Power Consumption
27	Accessories	Power Cord and Necessary Accessories Required for Operation Shall be Supplied
28	Warranty	Minimum 03 Years