

PRASAR BHARATI  
(BROADCASTING CORPORATION OF INDIA)  
DIRECTORATE GENERAL: ALL INDIA RADIO  
(P&D UNIT)

**SPECIFICATION FOR PROFESSIONAL SOUND CARD**

**1. GENERAL**

This specification describes the parameters of a Professional Sound Card for use in Broadcast Studios of All India Radio (AIR). Professional Sound Card will be installed in PCI/PCI-Express Slot of Audio Workstations (Desktop PCs) for sound recording, editing and transmission purposes, in broadcast studios. The card shall have state-of-the-art features to provide broadcast quality stereo analogue & digital balanced audio output. It should be rugged and easy to use and shall be able to work round the clock in Broadcast studios.

The tenderer must along with the tender documents submit the following documents: -

- (a) **Complete printed technical literature along with schematic diagram of the offered sound card.**
- (b) **Point to point compliance statement for all clauses of this specification highlighting deviations, if any. The format for point-to-point compliance statement is enclosed at Annexure.**
- (c) **Un priced Bill Of Material (BOM)**
- (d) **The quote should either be from the manufacturer or his authorized agent. In case the quote is from the authorized agent, a certificate from the original manufacturer that the tenderer is authorized agent for India should be enclosed with the tender.**
- (e) **Complete and unambiguous information in r/o quoted hardware, i.e. brand, series no., model no. and part no. of the sound card should clearly be given in commercial and un-priced bids as well as in compliance statement (in remarks' column).**

**Incomplete offers will be rejected.**

The tenderer may be required to demonstrate the functioning of the tendered unit at the time of technical evaluation in New Delhi. Non-compliance of equipment demonstration shall disqualify the tenderer.

**2. ESSENTIAL FEATURES OF THE SOUND CARD**

- 2.1 The card should be full duplex with provision to simultaneous record and play different programmes.
- 2.2 The card should be DSP based. All processing should be in digital domain.
- 2.3 A/D & D/A converters should be of minimum 24 bits.
- 2.4 The card is to be fitted either in PCI or PCI X bus of the computer. It should draw power supply from the bus of the computer.

- 2.5 All selections should be through the GUI based software control panel.
- 2.6 All digital inputs and outputs should conform to AES3-1992 signal format.
- 2.7 It should work on windows xp, windows 2003 server as well as on higher window operating systems.
- 2.8 Provision should exist to synchronize from an external word clock or AES/EBU sources.

### **3. TECHNICAL SPECIFICATION**

- (i) No. of Inputs: One; with provision to select either stereo balanced analogue input or digital input
- (ii) Analogue input:
  - a) Nominal Level: + 4 dBu
  - b) Max. Level: + 22 dBu
  - c) Impedance:  $\geq 10$  k Ohm
- (iii) Digital Input:
  - a) Sampling rates: AES/EBU to support at least sampling rates of 32 kHz, 44.1 kHz and 48 kHz
  - b) Level Reference: 0 dBFS digital = + 24dBu analogue
  - c) Level: Digital input level should match the analogue input as mentioned para 3(ii)
- (iv) No of outputs: One; in stereo balanced analogue as well as in digital (AES/EBU) format simultaneously
- (v) Analogue output:
  - a) Nominal Level: + 4 dBu
  - b) Max. Level: + 22 dBu
  - c) Impedance:  $\leq 100$  Ohm
- (vi) Digital output:
  - a) Level Reference: 0 dBFS digital = + 24dBu analogue
  - b) Output Level: Digital output level should match the analogue output as mentioned para 3(v)
- (vii) I/O Connectors: D connectors with Gold plated contacts; one each for analogue and digital signals
- (viii) Frequency Response:  $\pm 0.2$  dB over the entire frequency range of 20 Hz to 20 kHz
- (ix) THD + N:  $\leq 0.01\%$  at max. output level over the entire frequency range of 20 Hz to 20 kHz
- (x) S/N, unweighted: Better than 95 dB at nominal input and output levels

- (xi) Channel Phase difference:  
(20 Hz – 20 kHz)
  - a) Level: < 0.5 dB
  - b) Phase: < 2 °
- (xii) Analogue Ch. Cross talk < -115 dB

#### **4. CONNECTORS AND ACCESSORIES**

All mating Connectors, software driver for windows with media, utility package of the sound card and other essential accessories shall be supplied with each card.

#### **5. CLIMATIC CONDITIONS**

The equipment shall work satisfactorily in tropical climate with dry temperature range from 5 degree to 45 degree Celsius and humid conditions of 90% RH.

#### **6. PRE DISPATCH INSPECTION**

Inspection of the Sound Card shall be carried out at the premises of the supplier by representatives of P&D Unit, Directorate General: All India Radio, prior to the dispatch. The supplier should arrange facilities for testing including computer and measuring equipment etc.

#### **7. GUARANTEE**

The Sound Card shall be guaranteed for a minimum period of one year from the date of receipt of equipment at the site. Replacement/servicing shall be effected free of cost at site for hardware and software during the guarantee period of one year.

#### **8. INSTRUCTION MANUAL**

One set of Technical and installation Manual shall be supplied with each card free of cost. Software copy the manual should also be supplied.