

TENDER DOCUMENT

1. SATELLITE UP-LINK EQUIPMENT/ANTENNA
2. SOLID STATE TV TRANSMITTER(DIGITAL READY)
3. AUDIO MIXER



(TENDER : 2018 - 01)

(TECHNICAL & FINANCIAL PROPOSALS)

SHALIMAR RECORDING & BROADCASTING COMPANY LIMITED

36, Sector H-9, Islamabad, Pakistan.

Phone: 051-9265601-605, Fax: 051-4434830

E-mail: atvoperations@yahoo.com

SHALIMAR RECORDING & BROADCASTING COMPANY LIMITED
36, SECTOR H-9
ISLAMABAD

INSTRUCTIONS FOR BIDDERS

Subject: **TENDER FOR SUPPLY OF “VHF TV TRANSMITTER, UP-LINK EQUIPMENT WITH ACCESSORIES” TO SHALIMAR RECORDING & BROADCASTING COMPANY LIMITED.**

Sales tax and Pakistan Engineering Council registered firms are requested to submit the Technical and Financial proposals for the supply of **“VHF TV Transmitter, Up-Link equipment, Audio Mixer & Laptop”** as per attached list and technical specifications.

- a) The technical and financial proposals should be placed in two separately sealed envelopes and duly marked **“VHF TV Transmitter and Up-Link equipment”** addressed to the Chairman Tender Committee, Shalimar Recording & Broadcasting Company Limited, 36, Sector H-9, Islamabad should reach our office latest by **11:00 AM on 26th February 2018**. The technical proposals shall be opened at **11:30 A.M** on the same day in the presence of bidders or their representatives who may wish to attend.
- b) The prices should be quoted on FOR basis. These FOR prices should be inclusive of all applicable taxes and custom duties, etc. Payments against FOR basis will be made after receipt of Equipment and successful / satisfactory commissioning of the same.
- c) The consignment should be delivered at SRBC Head office 36, H-9 Islamabad. The consignments will however, be air freighted only on freight to collect at destination basis.
- d) An earnest money @ 2% of quoted total FOR value in favor of SRBC shall be attached with the financial proposal without which the offer will not be acceptable. However the same shall be returned to unsuccessful bidders after scrutiny / finalization of the tender.
- e) Performance bond / bank guarantee equivalent to 5 % of contract price is required to be submitted by successful bidder.
- f) The supplier will be solely responsible for customs duty and other Government Taxes and responsible to provide valid documents like shipping invoice, bill of entry etc.
- g) Terms of warranty should be spelt out in the financial proposal.
- h) Country of Origin of the quoted items should be clearly mentioned in the technical proposal.
- i) The Supplier will be required to furnish a certificate along with financial proposal that terms and conditions of the **Agreement enclosed** with the tender are acceptable and Agreement will be executed before the placement of purchase order provided the amount of order exceeds Rupees One Million. Any variance or disagreement to various clauses of Agreement must be elaborated at the time of submission of price quotation.

- j) The Supplier will undertake to supply the spares for maintenance of Equipment in Pakistan.
- k) The Supplier / Principal along with their local agents shall be responsible for after sales service / supply of spares/ software/ license and maintenance support etc for a period of at least 10 years after supply of Equipment. A certificate to this effect has to be issued by Manufacturer / Supplier / Local Agent.
- l) Quoted prices should be valid at least for a period of 90 days. Other terms and conditions, if any, should be spelt out clearly.
- m) The Equipment must be supplied at the earliest but not later than 45 days after receipt of confirmed purchase order from the Purchaser.
- n) Demonstration of equipment may be required.
- o) As per Government's law, all taxes will be deducted at source.
- p) The bidders are also requested to fulfill the following condition, such as **bidder's profile, principle's profile, agency certificate, detailed technical brochure, list of clients (local & International), sales tax registration, NTN certificate, Pakistan Engineering Council Valid registration and compliance remarks.**
- q) SRBC reserves the right to reject any or all the proposals in part or full. SRBC also reserves the right to increase or decrease the quantity and accessories and optional items indicated in the attached list.

Yours faithfully,

(SHAFIQ ANWAR)
CONTROLLER ENGINEERING
Operation & Maintenance
Ph: 92-51-9265601-605
Fax: 92-51-4434830

SHALIMAR RECORDING & BROADCASTING COMPANY LIMITED**(TENDER – 2018 - 1)****LIST OF ITEMS**

Sr.No	Description of Required Items	Page No
ITEM – 1	Satellite Up-Link Antenna	6,7
ITEM - 2	Satellite Encoder/Modulator	08
ITEM - 3	Satellite Block Up Converter (200Watt) BUC	09
ITEM -4	Audio Mixer	10
ITEM -5	Laptop	11
ITEM -6	VHF 2.5KW TV TRANSMITTER	12-13
ITEM -7	VHF 100WATT TV TRANSMITTER	14

SPECIFICATIONS

Satellite Up-Link Antenna with all Accessories

1-1 GENERAL FEATURES

Antenna Size

4.5 Meter

RF Specification

C-Band Frequency Transmit

Range 4Ghz to 8 Ghz

C-Band Frequency Receiver

Range 3Ghz to 5 Ghz

Gain at Midband

Rx 43.6dB, Tx 47.3dB

VSWR

Rx 1.25:1, TX 1.25:1

Beam width(-3dB)

Rx 1.09° Tx 0.71°

Antenna noise and Temperature

40°K, 29°K, 23°K, 19°K

Feed insertion loss

Rx 0.15 dB, Tx 0.17dB

Cross Polarization Isolation

OnAxis

(Rx35dB, Tx35dB)

1 db Beamwidth ((Rx30dB, Tx30dB)

Port to Port Isolation (Tx-Rx with Filter)

≥ 85dB

Feed Interface Transmit

CPR-137G

Feed Interface Receive

CPR-229F

LNB C-Band For Receiving

3.4-4.2 Ghz (60db gain) With reject filter/C band pass filter

Power Handling Capability

05 KW

Type Approvals or

•Paksat•APSTAR• ASIASAT• Chinasat• China OrientSat

Compliances:

• Sinosat• Intelsat• Eutelsat• ST-1• Indosat

Mounting kits for ODU

Required

- Reflector -----12 pieces made of alloy-aluminum, painting white color.
- Radial-----12 pieces made of steel with stainless steel joint, coat by heating soak zinc.
- Hub ----- aluminum casting, anodized coat.
- Pedestal ----- made of steel, surface processed by hot dipped zinc.
- OMT ----- aluminum casting, anodized coat, with transmit reject filter.
- Feed-horn ----- ripple type, aluminum casting, anodized coat
- Adjust mode ----- manual, self-existent EL axis and AZ axis to be adjusted with EL leading screw and AZ leading screw

Antenna's main parts

Mechanical Specification

Material above the Hub

Aluminum, steel and stainless steel

Finish of Reflectors

White Paint

Finish Steel parts

Hot dip zinc

Environmental specification

Operational Wind speed

35m/s

Survival Wind Speed

55m/s

Rain

10Cm/h

Humidity

0% to 100%

Seismic (Survival)

0.3G's Horizontal, 0.1G's Vertical

Temperature

-50° C to +60° C

1-2. Wave guide

C-band 12 Feet Flexible
Wave guide with
input/output connector

BID FORM

TENDER ITEM	DESCRIPTION	MAKE	Model	QTY	Price FOR
1-1	Satellite Antenna System			1	
1-2	Wave Guide			12 Feet	

Total FOR	
Estimated weight of the Consignment	
City & Country of Origin	

Important:

A separate price list of Essential spare parts / PCBs for above mentioned equipment may also be submitted with the bid form.

SATELLITE ENCODER/ MODULATOR**GENERAL FEATURES**

MPEG-2, MPEG-4		Supported 3G/HD/ SD-SDI
Video Input		
Video Input connector	BNC	
Video Input	Composite /SDI embedded	
video bit rate	1 Mb/s to 50 Mb/s	
Audio Input connector	XLR /stereo phono/RCAa	
Audio	(Mpeg-1 audio) layer2- Compliant	
Audio Input (Analog)	2 x stereo analog inputs with embedded audio OR AES/EBU audio input	
Audio(Digital)		
Symbol Rate	Symbol rate: 1Msps to 45 Msps (Optional extension to 66Msps)	
FEC	QPSK-1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK -3/5,2/3,3/4,5/6/8/9,9/10	
Logo Insertation	Assignable	
Modulation	DVB-S- QPSK, DVB-S2---QPSK, 8PSK,16APSK,32APSK,16QAM	
ASI		In/Out Module Built In/Switchable
10 MHz Reference		
L-Band out put	Frequency Range 950Mhz-2150Mhz	
L-Band power out	-40 dBm to +5 dBm (0.1 dB steps)	
IF Band	Frequency range 50 Mhz to 200Mhz (1 kHz steps)	
IF-Power Out	-30 dBm to +5 dBm (0.1 dB steps)	
IF connector out put	BNC / N-Type	
Ethernet Connector		Available
Roll-off:		0.05,0.10,0.15,0.20,0.25,0.35
Operating Voltage:		Single Phase 220 volt AC \pm 10 %, 50 Hz + 2%
Operational temperature:		0~50°C
Management	Local control: front panel keyboard /user management by Web Browser	
License type Software /Hardware	Encoder/Modulator Configured	
Software	Required for all hardware	

BIDFORM

TENDER ITEM	DESCRIPTION	MAKE	Model	QTY	Price FOR
1-1	Encoder/Modulator(DVB-S2)			1	

Total FOR	
Estimated weight of the Consignment	
City & Country of Origin	

Important:

A separate price list of Essential spare parts / PCBs/ Software of all hardware for above mentioned equipment may also be submitted with the bid form.

ITEM-- 03**C Band High Power Block Up-Converter 200WATT****GENERAL FEATURES**

C- band Up converter	Built In
C-Band Frequency	Range 4Ghz to 8 GHz
L-Band Frequency input (BUC)	950-1825 MHz
Out Put Interfaces Connector/coupler	137G
Input Interfaces L-Band	N-Type female
Input Power detector	-55 to - 20 dbm
Gain	84 db min
Rated output power (p1dB)	+ 53 dBm min
VSWR	1.5:1 max
10 Mhz Reference	Built In
physically conventional	Stand alone Modem
	1. 10 MHz input detector
	2. Input voltage and current monitoring.
BUC Diagnostics	3. Transmit L-band input level detector.
	4. Transmit RF output level detector.
	5. Alarm History
Humidity	100% Condensing
Operating Temperature	-40 °C to + 55° C
Operating Voltage:	Single Phase
	220 volt AC \pm 10 %, 50 Hz + 2%

BID FORM

TENDER ITEM	DESCRIPTION	MAKE	Model	QTY	Price FOR
1-1	Block up Converter 200Watt			1	

Total FOR	
Estimated weight of the Consignment	
City & Country of Origin	

Important:

A separate price list of Essential spare parts / PCBs/ Software of all hardware for above mentioned equipment may also be submitted with the bid form.

ITEM-- 04

Stereo Audio Mixer 16 Channel

MIC Input	10 MIC with 48 volt power and HPF per channel
Line Inputs	16 line inputs (8 mono and 4 stereo)
TR Inputs	Additional 2TR Inputs Provided to Accept the Output from Analog Devices or iPod/iPhone
Addition inputs	2 AUX Sends + 2 FX Sends
Operating Voltages	220 volt AC + 10 %, 50 Hz + 2%
Hum & Noise Level	-128dBu (20Hz-20KHz)
Crosstalk:	-74dB @ 1kHz

BID FORM

TENDER ITEM	DESCRIPTION	MAKE	Model	QTY	Price FOR
1-1	Audio Mixer			1	

Total FOR	
Estimated weight of the Consignment	
City & Country of Origin	

Important:

A separate price list of Essential spare parts / PCBs/ Software of all hardware for above mentioned equipment may also be submitted with the bid form

ITEM-- 05**Computer Laptop**

Processor	Core i7	8 th Generation
Hard Disk	8TB	
RAM	8GB	
Graphic Card	4GB	
Operating System	Window 10	
Display	15.5 inch	

BID FORM

TENDER ITEM	DESCRIPTION	MAKE	Model	QTY	Price FOR
1-1	LAPTOP			1	

Total FOR	
Estimated weight of the Consignment	
City & Country of Origin	

Important:

A separate price list of Essential spare parts / PCBs/ Software of all hardware for above mentioned equipment may also be submitted with the bid form.

SOLID STATE ANALOG/ (DIGITAL READY) VHF TV TRANSMITTER 2.5KW

VHF (Band-III) Solid State Analog/ TV Transmitter (**Digital Ready**)

Dual Exciter / Drive Option (Independent Exciters)

<p>Exciter / Driver</p> <p>TV Standard:</p> <p>Modular configuration</p> <p>Redundant Power supply</p> <p>Video / Audio Combined Amplification</p> <p>Linearity Pre correction</p> <p>Built in Band Pass & Notch Filters</p> <p>Operating Temperature:</p> <p>Humidity:</p> <p>Cooling System:</p> <p>Operation:</p> <p>Installation Altitude:</p> <p>Protections & Alarms:</p> <p>Operating Voltage:</p>	<p>with Synthesized Local Oscillator (programmable) CCIR 625, PAL - B, VHF Band III (Channel 12) Hot Plug able / Swap able Modules</p> <p>-10° C to +50° C 0 to 90 % (Non condensing) Forced air with built in blowers Continuous 24 Hours 2,000 m ~ 2500 m a.s.l Excessive VSWR, Over Voltage, Over Current, Over Temp, Excessive RF Drive, Lightning Protection.</p> <p>Single Phase 220 volt AC + 10 %, 50 Hz + 2%</p>
--	--

TECHNICAL SPECIFICATION

TRANSMITTER:

Output Power:	2000 W (Analog)
Number of Amplifiers:	2 OR More
RF Output Impedance:	50 Ω
Output Connector:	Female 7 / 16 N Type
VSWR:	Less than 1.1
Video Input :	1 V p-p 75 Ω , BNC
Differential Gain:	Within \pm 5 %
Differential Phase:	Within \pm 3°
Harmonic Distortion:	Less than 56 dB
Signal to Noise Ratio:	60 dB or better
Group Delay :	40 n sec
Group Delay Equalization:	Built in
Chrominance/Luminance Cross Talk:	< \pm 2 %
Audio Input:	600 Ω (Balance)
Pre-emphases:	50 μ sec
Harmonic Distortion:	< 0.5 %
FM Noise:	> 66 dB (400 Hz)

BID FORM

TENDER ITEM	DESCRIPTION	MAKE	Model	QTY	Price FOR
1-1	SOLID STATE ANALOG/ (DIGITAL READY) VHF TV TRANSMITTER 2.5KW			1	

Total FOR	
Estimated weight of the Consignment	
City & Country of Origin	

Important:

A separate price list of Essential spare parts / PCBs/ Software of all hardware for above mentioned equipment may also be submitted with the bid form.

100 WATT VHF TV TRANSMITTERS (Digital Ready)VHF (Band-III) Solid State Analog/ TV Transmitter (**Digital Ready**)

Exciter / Driver	with Synthesized Local Oscillator (programmable) CCIR 625, PAL - B, VHF Band III (Channel 12)
TV Standard:	
Video / Audio Combined Amplification	
Linearity Pre correction	
Built in Band Pass & Notch Filters	
Operating Temperature:	-10° C to +50° C
Humidity:	0 to 90 % (Non condensing)
Cooling System:	Forced air with built in blowers
Operation:	Continuous 24 Hours
Installation Altitude:	2,000 m ~ 2500 m a.s.l
Protections & Alarms:	Excessive VSWR, Over Voltage, Over Current, Over Temp, Excessive RF Drive, Lightning Protection.
Operating Voltage:	Single Phase 220 volt AC + 10 %, 50 Hz + 2%

TECHNICAL SPECIFICATION**TRANSMITTER:**

Output Power:	100 W (Analog) (Vary 0 to 100)
Number of Amplifiers:	2 OR More
RF Output Impedance:	50 Ω
Output Connector:	Female N Type
VSWR:	Less than 1.1
Video Input :	1 V p-p 75 Ω , BNC
Differential Gain:	Within \pm 5 %
Differential Phase:	Within \pm 3°
Harmonic Distortion:	Less than 56 dB
Signal to Noise Ratio:	60 dB or better
Group Delay :	40 n sec
Group Delay Equalization:	Built in
Chrominance/Luminance Cross Talk:	< \pm 2 %
Audio Input:	600 Ω (Balance)
Pre-emphases:	50 μ sec
Harmonic Distortion:	< 0.5 %
FM Noise:	> 66 dB (400 Hz)

BID FORM

TENDER ITEM	DESCRIPTION	MAKE	Model	QTY	Price FOR
1-1	100 WATT VHF TV TRANSMITTER (Digital Ready)			1	

Total FOR	
Estimated weight of the Consignment	
City & Country of Origin	

Important:

A separate price list of Essential spare parts / PCBs/ Software of all hardware for above mentioned equipment may also be submitted with the bid form.