TIBA Series CATV Distribution Amplifiers

Model	Bandwidth
TIBA-30-1220	5-42 MHz / 54-1220 MHz 5-85 MHz / 102-1220 MHz

The Toner two way apartment house type amplifiers with active return are broadband indoor GaAs Hybrid, high output level distribution amplifiers designed for 1.22 GHz RF distribution systems such as those in Cable Television Apartments, Hotels, Hospitals and other applications where a high-quality, low noise figure amplifier is necessary to amplify the signals in both the forward and return paths.

These are all designed with flat operational gain of 33dB in the forward bandwidth and 25dB in the reverse bandwidth. TIBA-30-1220 has sockets for plug-in controls of forward input stage control, balancing and return control at output stages. Forward path has also inter-stage variable gain and equalizer controls.

The amplifiers are powered by a plug-in wall type 24 VDC power transformer. 90-240 VAC applications are available with US, European and UK plugs.

FEATURES

- 1.222 GHz forward bandwidth
- GaAs Power Doubler Hybrid for high output levels with low distortions
- Active GaAs pHEMT Reverse
- Gain and equalization controls
- Aluminum chassis designed for excellent heat dissipation
- Surge protection at all ports
- UL and CE listed power transformers

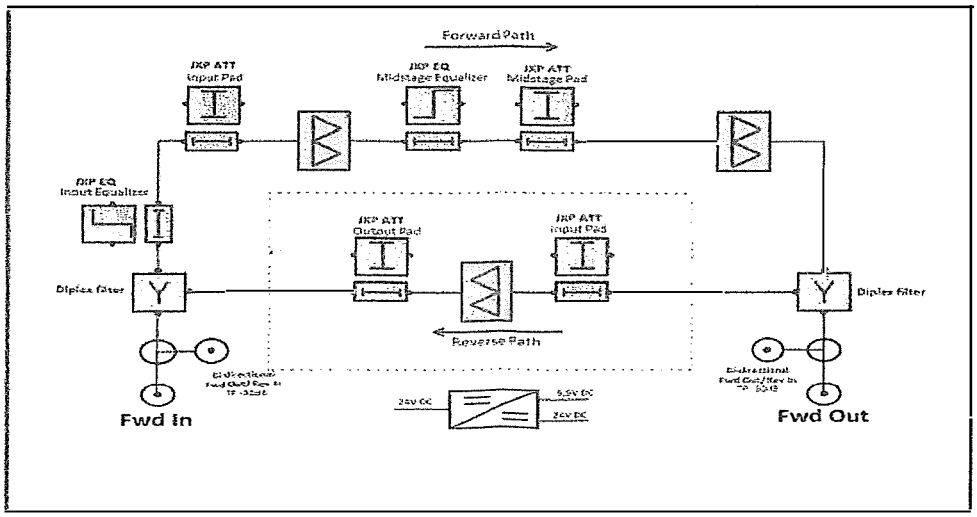

Figure 1 – Block Diagram

INSTALLATION CAUTION NOTES

1. Connect only to power adapter supplied with the amplifier. AC connection must be applied after all RF connections are done.
2. Do not short power supply terminals, else protective fuse inside of sealed power supply case will become open.
3. To access Amplifier Plug-in Pad and Equalizers, remove the front cover. After setting the Levels, replace the cover for safety and to prevent signal interference.

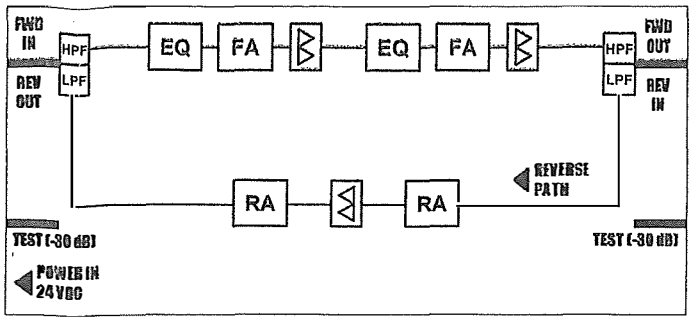

Figure 2 – Module & controls layout

SPECIFICATIONS

Parameter	Notes	Forward		Reverse		Units
Bandwidth	(1)	54-1218	102-1218	5-42	5-85	MHz
Technology		GaAs Power Doubler Hybrid		GaAs pHEMT		
Average Full Gain		33		25		dB
Return Loss, IN/OUT		-16		-16		dB
Test Points, Frw IN/Rev OUT	bidirectional	-30		-30		dB
Test Points, Frw OUT/Rev IN	bidirectional	-30		-30		dB
Input Gain Control	JXP plug-in (2)	0 to 20 dB in 2 dB steps		0 to 18 dB in 2 dB steps		dB
Second Stage Gain Control	JXP plug-in (2)	0 to 10 dB in 2 dB steps		0 to 20 dB in 2 dB steps		dB
Input Slope Control	JXP plug-in (2)	0 to 20 dB in 2 dB steps		N/A		dB
Second Stage Slope Control	JXP plug-in (2),(3)	0 to 10 dB in 2 dB steps		0 to 10 dB in 2 dB steps		dB
Forward Distortions:	53 dBmV output (NTSC 74 analog channels, 109.25 to 547.25 MHz, +75 SC-QAM-256 digital channels, 555 to 999 MHz -6dB offset relative to the analog carrier.)					
CTB		-60		N/A		dBc
CSO		-67		N/A		dBc
Crossmodulation (XMOD)		62		N/A		dBc
MER		40		N/A		dB
Forward Distortions:	44/56 dBmV output (NTSC 74 analog channels, 109.25 to 547.25 MHz, +75 SC-QAM-256 digital channels, 555 to 999 MHz -6dB offset relative to the analog carrier.)					
CTB		-60		N/A		dBc
CSO		-65		N/A		dBc
Crossmodulation (XMOD)		62		N/A		dBc
MER		40		N/A		dB
Reverse Distortions:		52 dBmV flat output, 2 ch according to ANSI SCTE1152006				dBmV
DTO on 7MHz		N/A		-70		dBc
DSO on 6MHz		N/A		-75		dBc
Crossmodulation (XMOD)		N/A		-66		dBc
Noise Figure	with 0 dB jumpers	6		6		dB
MAX RF Input Level (per channel, w/o using fixed input attenuator)	20 dBmV (NTSC 74 analog channels, +75 SC-QAM-256 digital channels, -6dB offset relative to the analog carrier.)					dBmV
Input/Output Connections		F Type				
Hum Modulation		-70				dBc
Surge Withstand		IEEE C62.41-Cat. A3(6KV, 200A)				
Powering		15				Watt
Power Requirement		Wall Power Transformer, Input = 90-240VAC , 50-60Hz, 1A				
Operating Temperature Range		-4° F to +130°F				degF
Weight		3.3 (1.5)				lbs (kg)
Dimensions (L x W x H)		195 x 160 x 79 (7-3/4 x 6-1/3 x 3)				mm (in)

NOTES:

(1) Band selection by on-site plug-in diplex filters.
(2) Universal JXP style pads.
(3) Universal JXP style plug-in equalizer pads.