



**BLONDER
TONGUE**
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INSTRUCTION MANUAL

AD-1B Series

Frequency Agile Demodulator

Stock No. 5932

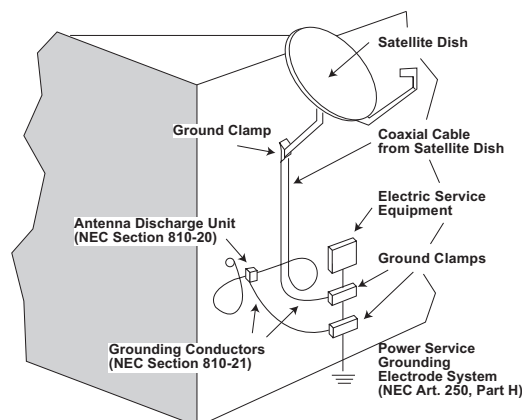
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Safety Instructions



You should always follow these instructions to help ensure against injury to yourself and damage to your equipment.

- Read all safety and operating instructions before you operate the demodulator.
- Retain all safety and operating instructions for future reference.
- Heed all warnings on the demodulator and in the safety and operating instructions.
- Follow all installation, operating, and use instructions.
- Unplug the demodulator from the AC power outlet before cleaning. Use only a damp cloth for cleaning the exterior of the demodulator.
- Do not use accessories or attachments not recommended by Blonder Tongue, as they may cause hazards, and will void the warranty.
- Do not operate the demodulator in high-humidity areas, or expose it to water or moisture.
- Do not place the demodulator on an unstable cart, stand, tripod, bracket, or table. The demodulator may fall, causing serious personal injury and damage to the demodulator. Install the demodulator only in a mounting rack designed for 19" rack-mounted equipment.
- Do not block or cover slots and openings in the demodulator. These are provided for ventilation and protection from overheating. Never place the demodulator near or over a radiator or heat register. Do not place the demodulator in an enclosure such as a cabinet without proper ventilation. Do not mount equipment in the rack space directly above or below the demodulator.
- Operate the demodulator using only the type of power source indicated on the marking label. Unplug the demodulator power cord by gripping the plug, not the cord.
- The demodulator is equipped with a three-wire ground-type plug. This plug will fit only into a ground-type power outlet. If you are unable to insert the plug into the outlet, contact an electrician to replace the outlet. Do not defeat the safety purpose of the ground-type plug.
- Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.
- Be sure that the outdoor components of the antenna system are grounded in accordance with local, federal, and National Electrical Code (NEC) requirements. Pay special attention to NEC Sections 810 and 820. See the example shown in the following diagram:



Safety Instructions - continued

- We strongly recommend using an outlet that contains surge suppression or ground fault protection. For added protection during a lightning storm, or when the demodulator is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the lines between the demodulator and the antenna. This will prevent damage caused by lightning or power line surges.
- Do not locate the antenna near overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing the antenna, take extreme care to avoid touching such power lines or circuits, as contact with them can be fatal.
- Do not overload wall outlets or extension cords, as this can result in a risk of fire or electrical shock.
- Never insert objects of any kind into the demodulator through openings, as the objects may touch dangerous voltage points or short out parts. This could cause fire or electrical shock.
- Do not attempt to service the demodulator yourself, as opening or removing covers may expose you to dangerous voltage and will void the warranty. Refer all servicing to authorized service personnel.
- Unplug the demodulator from the wall outlet and refer servicing to authorized service personnel whenever the following occurs:
 - The power supply cord or plug is damaged;
 - Liquid has been spilled, or objects have fallen into the demodulator;
 - The demodulator has been exposed to rain or water;
 - The demodulator has been dropped or the chassis has been damaged;
 - The demodulator exhibits a distinct change in performance.
- When replacement parts are required, ensure that the service technician uses replacement parts specified by Blonder Tongue. Unauthorized substitutions may damage the demodulator or cause electrical shock or fire, and will void the warranty.
- Upon completion of any service or repair to the demodulator, ask the service technician to perform safety checks to ensure that the demodulator is in proper operating condition.

The lightning flash with arrow-head symbol within an equilateral triangle is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER FROM THIS UNIT. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE

NOTE TO CATV SYSTEM INSTALLER

This reminder is provided to call the CATV System Installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Description

The Blonder-Tongue AD-1B is an agile audio/video demodulator. Front panel switches permit non-volatile RF tuning of any TV channels, including Broadcast UHF/VHF assignments and CATV Std/IRC/HRC assignments from 54 to 806 MHz and entire T-channel band from 5 to 48 MHz with Sub-band option. The AD-1B demodulates any NTSC signal to baseband video and audio signals for monitoring or remodulation. It also provides a 4.5 MHz sub-carrier and a broadband multiplex output for MTS/BTSC applications.

The AD-1B incorporates a PLL synthesized LO to assure precise tuning. A Nyquist SAW filter provides stable, accurate demodulation of the VSB signal. This maintains timing and minimizes distortions. Keyed AGC circuitry compensates for signal fluctuations. A synchronous video detector provides low differential gain and minimal phase distortion. This reduces video ringing and color smear.

The AD-1B requires only 1-3/4 inches of height in a 19 inch rack and has no special cooling requirements.

The AD-1B satisfies applications in CATV headends, TV broadcast studios, microwave hubs, translator sites, educational television systems, CCTV surveillance, and industrial video networks.

Features

- Agile Input - All Broadcast and CATV channels (including HRC & IRC) and T-channels with Sub-band Option
- Direct DIP switch channel selection - no memory to program, non-volatile
- Synthesized tuning - assures precise channel location
- Nyquist SAW filter for accurate sideband response
- Keyed AGC to give stable picture under varying input signal conditions
- Synchronous video detector for superior linearity
- Quadrature audio detector keeps distortion low
- 4.5 MHz modulated audio subcarrier output for economical handling of BTSC stereo encoded program
- Broadband multiplex audio output preserves stereo separation
- Low profile 1-3/4 high chassis
- Built-in microprocessor controlled serial data interface with RS-232 Option 20

Specifications

RF

Input Visual Carrier Frequency Range: 7 to 43 MHz* (Option 17) T7 to T13, 55.25 to 801.25 MHz
TV Bands Covered: Sub*, VHF Low, VHF High, Super, Hyper, and UHF including HRC/IRC/Offset Assign.

Input Level:

Single Ch., +45 dBmV Max., +35 dBmV Recommended
60 Chs., +20 dBmV Max., +10 dBmV Recommended

Noise Figure

VHF: 8-10 dB
UHF: 10 dB

Image Rejection

VHF: 65 dB Min.
UHF: 50 dB Min.

Sub-band Input Level: +24 dBmV Max. (*Sub-band Optional)

Video

Output Level (@75Ω): 1 V p-p

Video Bandwidth (@25 Hz to 4 MHz): ±1 dB

Differential Gain: 3% p-p

Differential Phase: 1.5° p-p

Group Delay: 0.2 MHz to 3.5 MHz, ±30 ns

Audio

Output Level (@600Ω Unbal.): 500 mV RMS

MPX Output Level (@600Ω Unbal.): 500 mV RMS

4.5 MHz Output Level (@75Ω): +35 dBmV

Harmonic Distortion: 1% Max.

Mechanical

Dimensions: 1-3/4 x 19 x 14-5/16 inches, HxWxD

Shipping Weight: 9 lbs.

Front Panel Controls Channel Selection: DIP Switches

Rear Panel Controls Sub-Band Option Power Switch: Slide DPDT

Indicators

Power-On: Green LED

Rear Panel Connectors

RF Input: Type "F"

Video Output: Type "F"

4.5 MHz Output: Type "F"

Audio Output: RCA Phono

MPX Output: RCA Phono

Sub-band Input: Type "F"

Sub-band RF Output: Type "F"

Power

Cord Set: 3-Wire, 6 ft.

Fuse (Rear Panel): 0.25A SB

General

Power Requirements: 117 VAC, 60 Hz, 16W

Temperature Range: 0° to 60° C

Accessories Supplied: (1) Sheet of channel-number labels, Coax cable (optional), 6-Pin Telephone cable (optional)

Controls and Connections

Front Panel

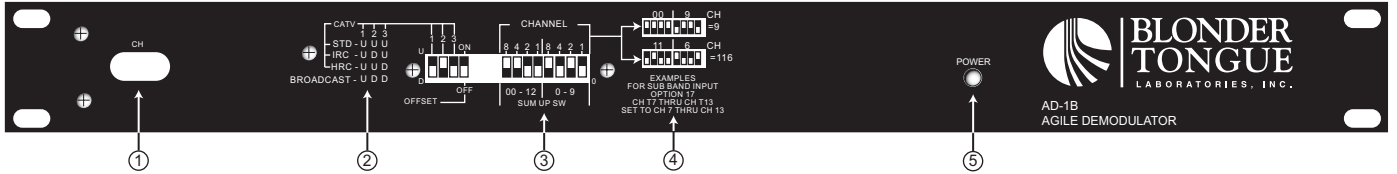


Figure 1 - Front Panel

- 1) **CHANNEL IDENTIFICATION** - Designated space to attach channel number labels (supplied).
- 2) **OPERATING MODE SWITCH** - Positions 1, 2 & 3 used to select CATV or Broadcast mode.
- 3) **CHANNEL SELECTOR** - Used to set input channel
- 4) **INPUT CHANNEL EXAMPLES** - Channels 9 & 116 shown
- 5) **POWER INDICATOR** - LED illuminates to indicate presence of power

Rear Panel

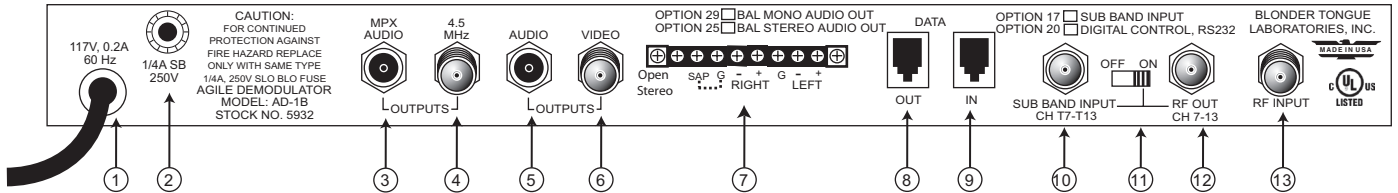


Figure 2 - Rear Panel

- 1) **LINE CORD** - With 3-prong plug for grounded outlets
- 2) **FUSE** - 1/4 Amp, Slo-Blow, 250 Volt
- 3) **MULTIPLEX AUDIO OUTPUT** - (RCA jack) broadband mplx. aud., 600 Ohm, unbalanced
- 4) **4.5 MHz OUTPUT** - (F-Conn) modulated audio subcarrier, 75 Ohms
- 5) **AUDIO OUTPUT** - (RCA jack) audio baseband, 600 Ohms, unbalanced
- 6) **VIDEO OUTPUT** - (F-Conn) baseband video, 75 Ohms
- 7) **BALANCED AUDIO OUT** - Mono/Stereo (with Option 29/25)
- 8) **DATA OUT** - (6-Pin Telephone Jack) RS-232 data output (with Option 20)
- 9) **DATA IN** - (6-Pin Telephone Jack) RS-232 data input (with Option 20)
- 10) **SUB-BAND IN** - (F-Conn) Sub-band RF input, 75 ohms (with Option 17)
- 11) **SUB-BAND POWER SWITCH** - (DPDT) On/Off switch (with Option 17)
- 12) **RF OUT** - (F-Conn) High VHF band RF output, 75 ohms (with Option 17)
- 13) **RF INPUT** - (F-Conn) all-band, 75 Ohms

Setting The Unit Input Channel

Two banks of switches are presented. Switch 1 has 4 positions and Switch 2 has 8 positions. Position 1, 2 & 3 of Switch 1 are used to set the unit operating mode as shown in the Switch 1 Table. Position 4 remains in the UP position.

INVOKED

REVOKED

	SWITCH 1			
	1	2	3	4
STD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IRC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HRC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Broadcast	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* Sub Band (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SWITCH 2							
8	4	2	1	8	4	2	1
Tens				Ones			
#00-12				#0-9			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Switch 2 is used to set the unit input channel number.

Channel setting is accomplished by setting the switch to the desired input channel. The arithmetic sum of the values of both the Tens section and the Ones section is equal to the channel number to which the unit is set.

Switch 2 is divided into 2 sections, the Tens section and the Ones section.

In each section, there are 4 switches labeled - 8,4,2,1. Each corresponds to its respective numeric value.

A simple chart, shown below, gives the corresponding switch positions for Tens, 1 to 12 and for the Ones, position 0-9.

The user sets the Tens section and the Ones section together to set the desired channel. (Example: CH 116, set 11 Tens and 6 ones for 116. For single digit channels, the Tens switch is set to zero.)

Switch 2 Numeric Value Chart

Tens Value	SWITCH 2								Ones Value
	Tens				Ones				
	8	4	2	1	8	4	2	1	
0 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 =
10 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 =
20 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 =
30 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3 =
40 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4 =
50 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5 =
60 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6 =
70 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7 =
80 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8 =
90 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9 =
100 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
110 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
120 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Channel Setting Examples:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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= CH 2

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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= CH 58

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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= CH 87

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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= CH 116

INVOKED

REVOKED

OPTION 17

SUB-BAND INPUT

Description

The sub-band Option 17 consists of a block converter placed before the product's main RF input. The converter translates the entire T-channel band (5-50 MHz) to the high VHF TV band (173-218 MHz), and presents this as the sub-band converter output on the rear panel. This output is coupled via a short coax jumper to the basic product's RF input. The converter local oscillator operates at a frequency of 168.25 MHz. Therefore, at the output of the converter, standard "T" channels appear as channel "7" for "T-7", channel "8" for "T-8", and so on. Selection of the appropriate T-channel to be processed is made via the front panel input frequency select DIP switches following the channel "7" settings for T-7, channel "8" settings for T-8, and so on.

A complete frequency selector chart is provided below. In addition, one may follow the settings for standard broadcast channels 7-13 as if they were T-7 through T-13, as described on Page 7.

The sub-channel converter has a conversion loss of approximately 8 dB. Therefore, a nominal input signal level to the sub-band converter should be between 3 and 23 dBmV to ensure proper operation.

Connections for Sub-Band Options

1. Set the Sub-Band selector located on the back panel to the ON position.
2. Connect the cable containing the Sub-Band channels (T-7 thru T-13) to the Sub-Band input.
3. Using the supplied loop-thru cable, connect the Sub-Band output to the RF input.
4. Set the AD-1B front panel switches (Input Channel Selector) for the desired Sub-Band channel by using the chart below:

Input Channel Selector - Settings												
	Switch 1				Switch 2 (Tens)				Switch 2 (Ones)			
T Channel	1	2	3	4	8	4	2	1	8	4	2	1
T-7	■	■	■	■	■	■	■	■	■	■	■	■
T-8	■	■	■	■	■	■	■	■	■	■	■	■
T-9	■	■	■	■	■	■	■	■	■	■	■	■
T-10	■	■	■	■	■	■	■	■	■	■	■	■
T-11	■	■	■	■	■	■	■	■	■	■	■	■
T-12	■	■	■	■	■	■	■	■	■	■	■	■
T-13	■	■	■	■	■	■	■	■	■	■	■	■

■ = Switch UP Position, Invoked

□ = Switch DOWN Position, Revoked

For operation of the AD-1B with Non-Sub-Band channels, set the Sub-Band Selector to the OFF position (on back panel) and connect the coax cable from the system to the RF Input on the back panel.

Frequency Allocation Tables

EIA Chan.	Standard Video	Incremental Video (IRC)	Harmonic Video (HRC)
02	55.2500	55.2625	54
03	61.2500	61.2625	60
04	67.2500	67.2625	66
01	NA	73.2625	72
05	77.2500	79.2625	78
06	83.2500	85.2625	84
95	91.2500	91.2625	90
96	97.2500	97.2625	96
97	103.2500	103.2625	102
98	109.2750	109.2750	
99	115.2750	115.2750	Cannot lock to comb ref. refer to FCC regs
14	121.2625	121.2625	120
15	127.2625	127.2625	126
16	133.2625	133.2625	132
17	139.2500	139.2625	138
18	145.2500	145.2625	144
19	151.2500	151.2625	150
20	157.2500	157.2625	156
21	163.2500	163.2625	162
22	169.2500	169.2625	168
07	175.2500	175.2625	174
08	181.2500	181.2625	180
09	187.2500	187.2625	186
10	193.2500	193.2625	192
11	199.2500	199.2625	198
12	205.2500	205.2625	204
13	211.2500	211.2625	210
23	217.2500	217.2625	216
24	223.2500	223.2625	222
25	229.2625	229.2625	228
26	235.2625	235.2625	234
27	241.2625	241.2625	240
28	247.2625	247.2625	246
29	253.2625	253.2625	252
30	259.2625	259.2625	258
31	265.2625	265.2625	264
32	271.2625	271.2625	270
33	277.2625	277.2625	276
34	283.2625	283.2625	282
35	289.2625	289.2625	288
36	295.2625	295.2625	294
37	301.2625	301.2625	300
38	307.2625	307.2625	306
39	313.2625	313.2625	312
40	319.2625	319.2625	318
41	325.2625	325.2625	324
42	331.2750	331.2750	330
43	337.2625	337.2625	336
44	343.2625	343.2625	342
45	349.2625	349.2625	348
46	355.2625	355.2625	354
47	361.2625	361.2625	360
48	367.2625	367.2625	366
49	373.2625	373.2625	372
50	379.2625	379.2625	378
51	385.2625	385.2625	384
52	391.2625	391.2625	390
53	397.2625	397.2625	396
54	403.2500	403.2625	402
55	409.2500	409.2625	408
56	415.2500	415.2625	414
57	421.2500	421.2625	420
58	427.2500	427.2625	426
59	433.2500	433.2625	432
60	439.2500	439.2625	438
61	445.2500	445.2625	444
62	451.2500	451.2625	450

EIA Chan.	Standard Video	Incremental Video (IRC)	Harmonic Video (HRC)
63	457.2500	457.2625	456
64	463.2500	463.2625	462
65	469.2500	469.2625	468
66	475.2500	475.2625	474
67	481.2500	481.2625	480
68	487.2500	487.2625	486
69	493.2500	493.2625	492
70	499.2500	499.2625	498
71	505.2500	505.2625	504
72	511.2500	511.2625	510
73	517.2500	517.2625	516
74	523.2500	523.2625	522
75	529.2500	529.2625	528
76	535.2500	535.2625	534
77	541.2500	541.2625	540
78	547.2500	547.2625	546
79	553.2500	553.2625	552
80	559.2500	559.2625	558
81	565.2500	565.2625	564
82	571.2500	571.2625	570
83	577.2500	577.2625	576
84	583.2500	583.2625	582
85	589.2500	589.2625	588
86	595.2500	595.2625	594
87	601.2500	601.2625	600
88	607.2500	607.2625	606
89	613.2500	613.2625	612
90	619.2500	619.2625	618
91	625.2500	625.2625	624
92	631.2500	631.2625	630
93	637.2500	637.2625	636
94	643.2500	643.2625	642
100	649.2500	649.2625	648
101	655.2500	655.2625	654
102	661.2500	661.2625	660
103	667.2500	667.2625	666
104	673.2500	673.2625	672
105	679.2500	679.2625	678
106	685.2500	685.2625	684
107	691.2500	691.2625	690
108	697.2500	697.2625	696
109	703.2500	703.2625	702
110	709.2500	709.2625	708
111	715.2500	715.2625	714
112	721.2500	721.2625	720
113	727.2500	727.2625	726
114	733.2500	733.2625	732
115	739.2500	739.2625	738
116	745.2500	745.2625	744
117	751.2500	751.2625	750
118	757.2500	757.2625	756
119	763.2500	763.2625	762
120	769.2500	769.2625	768
121	775.2500	775.2625	774
122	781.2500	781.2625	780
123	787.2500	787.2625	786
124	793.2500	793.2625	792
125	799.2500	799.2625	798

VHF Broadcast Channels Channel	Video (MHz)
2	55.25
3	61.25
4	67.25
5	77.25
6	83.25
7	175.25
8	181.25
9	187.25
10	193.25
11	199.25
12	205.25
13	211.25
UHF Broadcast Channels Channel	Video (MHz)
14	471.25
15	477.25
16	483.25
17	489.25
18	495.25
19	501.25
20	507.25
21	513.25
22	519.25
23	525.25
24	531.25
25	537.25
26	543.25
27	549.25
28	555.25
29	561.25
30	567.25
31	573.25
32	579.25
33	585.25
34	591.25
35	597.25
36	603.25
37	609.25
38	615.25
39	621.25
40	627.25
41	633.25
42	639.25
43	645.25
44	651.25
45	657.25
46	663.25
47	669.25
48	675.25
49	681.25
50	687.25
51	693.25
52	699.25
53	705.25
54	711.25
55	717.25
56	723.25
57	729.25
58	735.25
59	741.25
60	747.25
61	753.25
62	759.25
63	765.25
64	771.25
65	777.25
66	783.25
67	789.25
68	795.25
69	801.25

Sub Band Channels Channel	Standard Video
T7	7
T8	13
T9	19
T10	25
T11	31
T12	37
T13	43
T14	49

Installation and Operation

Note to CATV SYSTEM Installer

This reminder is provided to call the CATV System Installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Unpacking and Handling

Each unit is shipped with all equipment assembled, wired, factory tested, and then packaged in an appropriate shipping container.

Ensure that all accessories are removed from the container and packing material before they are discarded.

Mechanical Inspection

Inspect the front and rear of the equipment for shipping damage. Make sure the equipment is clean, and no wires, cables, or connectors are broken, damaged or loose.

Damage in Shipment

Should damage be discovered after unpacking the system, immediately file a claim with the carrier. A full report of the damage shall be made and a copy forwarded to BLONDER TONGUE Laboratories, Inc. The company will then advise what disposition is to be made of the equipment.

Precautions

Adherence to the initial installation precautions outlined in the Table below will help prevent problems arising during

Installation Precautions Table

PRECAUTIONS	REQUIREMENTS
Ensure easy access to rack wiring.	Allow a minimum of 18 inches behind the equipment rack(s)
Facilitate servicing and maintenance.	Allow a minimum of 36" of clearance in front of the equipment rack(s).
Avoid direct heating or air conditioning.	If unavoidable, use deflector plates.
AC power source outlets.	Locate equipment near sufficient outlets to provide power for test equipment and power tools.
Rack Support.	Make certain rack supports are sufficiently rigid to support racks.
Building leakage.	Beware of dripping water onto equipment from leaky roofs, wave-guide roof entries, and cold water pipe condensations.

Returning Product for Repair (or Credit)

A Return Material Authorization (RMA) Number is required on all products returned to Blonder Tongue, regardless if the product is being returned for repair or credit. Before returning product, please contact the Blonder Tongue Service Department at 1-800-523-6049, Ext. 4256 or visit our website: www.blondertongue.com for further information.

Preparation For Use

After mounting the AD-1B Demodulator in the rack observe the following signal interconnections:

Input

RF Input

Connect to 75 Ohm antenna or cable signal source providing levels between -3 and +40 dBmV. Some derating may be required if imbalanced or high level multiple signals are present simultaneously.

Output

Several possible applications exist. These include feeds to monitors, switchers, and modulators. A single video output is provided but three audio options are available. Choose the appropriate audio output from those listed below. The example here is a demod/remod application.

Video Output

Connect to the video input jack. The AD-1B furnishes the nominal standard of 1-Volt p-p. Use the level control provided on the A/V modulator to adjust for optimum depth of video modulation.

Audio Output

Connect to the audio input jack. The AD-1B furnishes 500 mV RMS of baseband audio. This connection is for monaural audio. Use the level control provided on the A/V modulator to adjust for optimum deviation of audio modulation.

4.5 MHz Output

Connect to the 4.5 MHz aural input jack. The AD-1B furnishes +35 dBmV of composite audio. This is the preferred connection for BTSC stereo operation. The modulator's audio modulation control will not be functional when operated in this mode. Levels are established by the broadcast source. Some modulators do not provide this input option. Consult the manufacturer.

Multiplex Audio

Connect to the audio input jack. The AD-1B furnishes 500 mV RMS of broadband audio. This is the alternate connection for BTSC stereo. Use the level control provided on the A/V modulator to adjust for optimum deviation of audio modulation. The modulator must have sufficient audio bandwidth to pass a BTSC signal. The modulator's audio modulation indicator may be unreliable when operated in this mode. Consult the manufacturer.

Limited Warranty

Blonder Tongue Laboratories, Inc. (BT) will at its sole option, either repair or replace (with a new or factory reconditioned product, as BT may determine) any product manufactured by BT which proves to be defective in materials or workmanship or fails to meet the specifications which are in effect on the date of shipment or such other specifications as may have been expressly agreed upon in writing (i) for a period of one (1) year from the date of original purchase (or such shorter period of time as may be set forth in the license agreement specific to the particular software being licensed), with respect to iCentral™ (hardware and software) and all other software products (including embedded software) licensed from BT, (ii) for a period of one (1) year from the date of original purchase, with respect to all fiber optics receivers, transmitters, couplers and integrated receivers/distribution amplifiers (including TRAILBLAZER™, RETRO-LINX™ and TWIN STAR™ products) as well as for VideoCipher® & DigiCipher® satellite receivers, and (iii) for a period of three (3) years from the date of original purchase, with respect to all other BT products. Notwithstanding the foregoing, in some cases, the warranty on certain proprietary sub-assembly modules manufactured by third-party vendors and contained in BT products and on certain private-label products manufactured by third-parties for resale by BT are of shorter duration or otherwise more limited than the standard BT limited warranty. In such cases, BT's warranty with respect to such third-party proprietary sub-assembly modules and private-label products will be limited to the duration and other terms of such third-party vendor's warranty. In addition, certain products, that are not manufactured but are resold by BT, carry the original OEM warranty for that product. The limited warranty set forth in this paragraph does not apply to any product sold by BT, which at the time of sale constituted a Closeout Product.

BT will at its sole option, either repair or replace (with a new or factory reconditioned product, as BT may determine) any product sold by BT which at the time of sale constituted a closeout item ("Closeout Product"), which proves to be defective in materials or workmanship or fails to meet the specifications which are in effect on the date of shipment or such other specifications as may have been expressly agreed upon in writing, for a period of ninety (90) days from the date of original purchase. Notwithstanding the foregoing, in some cases, the warranty on third party software and on certain proprietary sub-assembly modules manufactured by third-party vendors and contained in BT products and on certain private-label products manufactured by third-parties for resale by BT are of shorter duration or otherwise more limited than the BT limited warranty for Closeout Products. In such cases, BT's warranty for Closeout Products constituting such third party software, third-party proprietary sub-assembly modules and private-label products will be limited to the duration and other terms of such third-party vendor's warranty. In addition, notwithstanding the foregoing, (i) certain Closeout Products that are not manufactured (but are resold) by BT, carry the original OEM warranty for such products, which may be longer or shorter than the BT limited warranty for Closeout Products. All sales of Closeout Products are final.

To obtain service under this warranty, the defective product, together with a copy of the sales receipt or other satisfactory proof of purchase and a brief description of the defect, must be shipped freight prepaid to: Blonder Tongue Laboratories, Inc., One Jake Brown Road, Old Bridge, New Jersey 08857.

This warranty does not cover damage resulting from (i) use or installation other than in strict accordance with manufacturer's written instructions, (ii) disassembly or repair by someone other than the manufacturer or a manufacturer-authorized repair center, (iii) misuse, misapplication or abuse, (iv) alteration, (v) lack of reasonable care or (vi) wind, ice, snow, rain, lightning, or any other weather conditions or acts of God.

OTHER THAN THE WARRANTIES SET FORTH ABOVE, BT MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND, EXPRESS OR IMPLIED, AS TO THE CONDITION, DESCRIPTION, FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY OR AS TO ANY OTHER MATTER, AND SUCH WARRANTIES SUPERSEDE ANY ORAL OR WRITTEN WARRANTIES OR REPRESENTATIONS MADE OR IMPLIED BY BT OR BY ANY OF BT'S EMPLOYEES OR REPRESENTATIVES, OR IN ANY OF BT'S BROCHURES, MANUALS, CATALOGS, LITERATURE OR OTHER MATERIALS. IN ALL CASES, BUYER'S SOLE AND EXCLUSIVE REMEDY AND BT'S SOLE OBLIGATION FOR ANY BREACH OF THE WARRANTIES CONTAINED HEREIN SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT F.O.B. SHIPPING POINT, AS BT IN ITS SOLE DISCRETION SHALL DETERMINE. BT SHALL IN NO EVENT AND UNDER NO CIRCUMSTANCES BE LIABLE OR RESPONSIBLE FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, PUNITIVE, DIRECT OR SPECIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT LIABILITY OR OTHERWISE OR ANY OTHER LEGAL THEORY ARISING DIRECTLY OR INDIRECTLY FROM THE SALE, USE, INSTALLATION OR FAILURE OF ANY PRODUCT ACQUIRED BY BUYER FROM BT.

All claims for shortages, defects and non-conforming goods must be made by Buyer in writing within five (5) days of receipt of merchandise, which writing shall state with particularity all material facts, concerning the claim then known to Buyer. Upon any such complaint, Buyer shall hold the goods complained of intact and duly protected, for a period of up to sixty (60) days. Upon the request of BT, Buyer shall ship such allegedly nonconforming or defective goods, freight prepaid to BT for examination by BT's inspection department and verification of the defect. BT, at its option, will either repair, replace or issue a credit for products determined to be defective. BT's liability and responsibility for defective products is specifically limited to the defective item or to credit towards the original billing. All such replacements by BT shall be made free of charge f.o.b. the delivery point called for in the original order. Products for which replacement has been made under the provisions of this clause shall become the property of BT. Under no circumstances are products to be returned to BT without BT's prior written authorization. BT reserves the right to scrap any unauthorized returns on a no-credit basis. Any actions for breach of this contract must be commenced by Buyer within thirteen (13) months after the cause of action has accrued. A copy of BT's standard terms and conditions of sale, including the limited warranty, is available from BT upon request. Copies of the limited warranties covering third-party proprietary sub-assembly modules and private-label products manufactured by third-parties are also available from BT on request. VideoCipher® & DigiCipher® are registered trademarks of Motorola Corp.



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