AOR ®

TVA-1

NTSC TV CONVERTER

Owner's Manual

AOR, LTD.

Introduction:

Thank you for purchasing the TVA-1 NTSC TV converter. When using the TVA-1 with the AR5000 or AR5000+3 communications receiver, the TVA-1 will add the ability to receive broadcast television signals (NTSC) and allow monitoring video feeds from a variety of sources including public safety agencies, aircraft, Amateur Radio FSTV, news media video and more.
(Ability to monitor varies with location and antenna system in use.)

Features:

- Compact size (3-3/4 (W) x 1-1/4 (H) x 2-3/4 (D), projections excluded) and light weight (approximately 4.2 oz)
- 10.7 MHz IF input from receiver, Line output and video output
- Simple operation
- 180 days limited warranty

Package Contents:

- One TVA-1 TV converter
- One BNC-BNC patch cable
- One owner's manual (this booklet)
- One 120 V AC adapter

System Requirements:

AOR AR5000 or AR5000+3 communications receiver or equivalent (with 10.7 MHz IF output, 10 MHz Bandwidth)

- Receiver antenna
- External 12 VDC adapter, included)
- 2 shielded cables with RCA-type plugs at each end (not included)
- NTSC monitor (not included)
- Audio amplifier and speaker (optional)

AR5000 setup

1. Push the **FUNC** key. The **FUNC** icon appears on the top left corner of the LCD.
2. Push the **KHz/CONFIG** key.
3. Push the UP key twice to get **EXT – IF OFF** on the LCD.
4. Rotate the small dial to change **OFF** to **1** on the LCD.
5. Push the **MHz/ENT** key.
6. Push the **FUNC** key again.
7. Push the **3/IF BW** key.
8. Rotate the small dial to get **220 KHz** on the LCD.
9. Push the **MHz/ENT** key.

Front Panel Dip Switch Setting

The front DIP switch is used to select either conventional broadcast TV [AM] mode or security camera TV [FM] mode.

The second DIP switch is used to select 5.5 MHz or 6.5 MHz FM sub-carrier frequency.

Operations:

1. Using the supplied BNC-BNC patch cable, connect between the IF output of the receiver and the **IF IN** of the TVA-1.
2. Using a shielded cable with RCA-type plugs at both ends (not included), connect between **VIDEO OUT** of the TVA-1 and the **VIDEO INPUT** of the monitor.
3. Connect the antenna to your receiver. Apply power to the receiver, TVA-1, and monitor.
4. ***Set the frequency of your receiver to 4.15 MHz lower than the desired audio frequency*** of the TV channel (see below chart).
5. To get a best picture quality, you may need to readjust the receiver frequency.
6. Optional: Connect **LINE OUT** to line-level input of monitor or audio amplifier using shielded cable with RCA-type connectors.

NOTE:

1. Note all video is NTSC format. The TVA-1 cannot be used with PAL, SECAM, Slow-scan or digital video formats.
2. Results can vary based on distance to the transmitter and the antenna system in use.

Specifications:

Receive type:	NTSC
Input frequency:	10.7 MHz
Operating voltage:	12.0 V DC (120 V AC adapter included)
Operating temperature:	14 ~ 144 degrees (F)
Output:	Video 1 V p-p (75 ohm)
	Audio 0.3 V rms (47 Kohm)
Dimensions:	3-3/4 (W) x 1-1/4 (H) x 2-3/4 (D), projections excluded
Weight :	4.2 oz

Appendix:

US Broadcast TV frequency Allocations

Channel	Video (MHz)	Audio (MHz)	Set freq. (MHz)	Channel	Video (MHz)	Audio (MHz)	Set freq. (MHz)
2	55.25	59.75	55.6	30	567.25	571.75	567.60
3	61.25	65.75	61.6	31	573.25	577.75	573.60
4	67.25	71.75	67.6	32	579.25	583.75	579.60
5	77.25	81.75	73.6	33	585.25	589.75	585.60
6	83.25	87.75	79.6	34	591.25	595.75	591.60
7	175.25	179.75	175.6	35	597.25	601.75	597.60
8	181.25	185.75	181.6	36	603.25	607.75	603.60
9	187.75	191.75	187.6	37	609.25	613.75	609.60
10	193.25	197.75	193.6	38	615.25	619.75	615.60
11	199.25	203.75	199.6	39	621.25	625.75	621.60
12	205.25	209.75	205.6	40	627.25	631.75	627.60
13	211.25	215.75	211.6	41	633.25	637.75	633.60
14	471.25	475.75	471.6	42	639.25	643.75	639.60
15	477.25	481.75	477.6	43	645.25	649.75	645.60
16	483.25	487.75	483.6	44	651.25	655.75	651.60
17	489.25	493.75	489.6	45	657.25	661.75	657.60
18	495.25	499.75	495.6	46	663.25	667.75	663.60
19	501.25	505.75	501.6	47	669.25	673.75	669.60
20	507.25	511.75	507.6	48	675.25	679.75	675.60
21	513.25	517.75	513.6	49	681.25	685.75	681.60
22	519.25	523.75	519.6	50	687.25	691.75	687.60
23	525.25	529.75	525.6	51	693.25	697.75	693.60
24	531.25	535.75	531.6	52	699.25	703.75	699.60
25	537.25	541.75	537.6	53	705.25	709.75	705.60
26	543.25	547.75	543.6	54	711.25	715.75	711.60
27	549.25	553.75	549.6	55	717.25	721.75	717.60
28	555.25	559.75	555.6	56	723.25	727.75	723.60
29	561.25	565.75	561.6	57	729.25	733.75	729.60

Channel	Video (MHz)	Audio (MHz)	Set freq. (MHz)	Channel	Video (MHz)	Audio (MHz)	Set freq. (MHz)
58	735.25	739.75	735.60	68	795.25	799.75	795.60
59	741.25	745.75	741.60	69	801.25	805.75	801.60
60	747.25	751.75	747.60	70	807.25	811.75	807.60
61	753.25	757.75	753.60	71	813.25	817.75	813.60
62	759.25	763.75	759.60	72	819.25	823.75	819.60
63	765.25	769.75	765.60	73	825.25	829.75	825.60
64	771.25	775.75	771.60	74	831.25	835.75	831.60
65	777.25	781.75	777.60	75	837.25	841.75	837.60
66	783.25	787.75	783.60	76	843.25	847.75	843.60
67	789.25	793.75	789.60				

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This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.