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# **AR3030 BULLETIN PAGE**

Archive originally from the AOR-UK website in 2008, edited in 2021 by AOR Ltd. In Japan.

This information is supplied as a convenience to our loyal customers still using discontinued legacy AOR receivers.

Please note that the information is supplied "as is" without any support nor obligation. This model is no-longer accepted for repair and none of the parts are available anymore.

Some pdf files linked in this archive might mention contact details for AOR-UK and AOR Manufacturing Ltd. These are not valid anymore and can be ignored.

Reset	
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Operating manual addendum DOWNLOAD for RS232 access etc	<u>.</u>

#### **Microprocessor Reset**

There is a 'small' chance that the receiver will not power up correctly when switches on for the first time. This is due to the buildup of a static charge during transit from the packaging etc. Should this occur, simply switch the set off, disconnect the power supply and leave for a few minutes.

Should you experience problems with the receiver "apparently doing something unexpected", simply switch off the receiver using the main power switch and leave for about 10 seconds. Switch the receiver back on again and check if the problem has been cleared.

If this does not appear to solve the problem disconnect all connections and peripherals such as tape recorders, weather facsimile printers, aerials and the power supply. Switch the receiver off and leave for one minute. Reconnect the power supply and test again.

Should the receiver still refuse to operate correctly, turn the set up-side-down and locate a small hole in the bottom cabinet close to the main rotary tuning control. This hole provides access to the microprocessor rest switch.

With the AR3030 connected to its power supply and switched ON, momentarily press this switch and release using preferably a non-conductive thin probe such as a cocktail stick or cotton bud. This action will reset the microprocessor.

Should the receiver fail to power up, check the power supply and main fuse. The AR3030 does contain an internal DC power fuse.

An additional SOFTWARE reset (a FULL RESET) is available by depressing the [ENT] key (either of the mode keys on some production units) while switching the receiver ON. Hold in the [ENT] key while all the LCD segments appear and keep it depressed until the set returns to 10.000MHz, only then release the key, this will ensure a "full" reset. This may be useful should the standard reset not appear to fully reset the unit.

\*Should the Collins filter be fitted and the receiver's microprocessor reset you must hold the [3] key while resetting via the bottom case rest switch. This action alters the carrier re-insertion point to optimize the SSB filters characteristics\*

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### Fitting optional Collins filters to the AR3030 receiver

To limit marking of the case, we recommend placing the receiver onto a clean soft duster rather than directly onto a rubber bench mat. Ensure a "tight fitting" screw driver is used to limit marking to the black screw heads. Don't slip with the screwdriver! All sets are quality control tested / cosmetically inspected before shipping; however it is advisable to confirm correct operation prior to disassembly.

#### All filter options:

a. Remove the bottom case. Ensure that the speaker connection plug is "carefully" unplugged noting it's position and avoiding damage to the lead.

- b. Remove the two screws securing the RS232 socket from the rear panel.
- c. Remove the 2 screws from the wire ANT terminal.
- d. Place the set upside down with the front panel facing towards you.
- e. Carefully unplug the blue/white lead which emanates from the rear case direction (about 7 o'clock from the speaker connector).
- f. Carefully pull the coax cable from PCB ANT connector.
- g. Remove (de-solder) the wire from BNC connector.
- h. Gently lift the I.F. PCB upward in a folding motion from the rear. The underside of the PCB is now acceptable for filter fitment.

# The choice of filter position is as follows:

<u>CW filter only</u> - Collins 526 8634 010 or 526 8693 010

Optional CW position.

<u>SSB filter only</u> - Collins 526 8635 010 or 526 8694 010

Originally it had been suggested that if no CW filter is fitted, the Collins SSB filter could be fitted to the CW OPTION PCB position to allow use of both the ceramic and Collins filters. In practice, the [NOR] [NRW] display flags cannot be selected in USB, LSB and FAX modes. The final production units require the Collins SSB filter to be fitted in place of the standard Murata filter... the operating manual is incorrect on this subject.

Remember: The SSB Collins filter option "must" be fitted in place of the standard ceramic Murata filter rather than in the CW option position.

CW & SSB filters at the same time -

Fit the Collins CW filter in the optional position and Collins SSB filter in place of the ceramic SSB filter.

Wider AM filter - Collins standard 526 8636 010 or 526 8695 010 (option 526 8561 020)

It is theoretically possible to fit a wider Collins 8.5kHz/-3dB AM filter (special order) in place of the 6kHz filter. There should be little call for this wide filter option and it is not largely referred to.

Install the filter(s) in an appropriate position followed by adjustment of the coils:

Note: Do not adjust the coils unrelated to the filter(s) installed.

#### **CW** filter

For CW filter installation the following simplified method is adequate. Ultimately use of sweep generator and oscilloscope is desirable.

1. Solder the Collins CW filter into the optional position.

2. The switching resistor of 560 OHMS may not be fitted to the I.F. PCB just in front of the filter. If it is not fitted solder an appropriate resistor in place.

3. Fit the I.F. PCB back into place but do not re-fit the case at this time.

4. Switch the receiver to CW mode (the BFO engages automatically) and select the narrow filter bandwidth.

5. Inject an unmodulated signal from a signal generator into the aerial socket.

6. While receiving a signal at S-3 level rotate the coils on either side of the filter (in line with it!) until the S-meter deflects to the maximum point. "Carefully" rotate the coils as the S-meter reading will only change gradually.

## SSB filter

In case of the SSB filter installation using the simplified method is unable to remove PASS-BAND ripple. Use of a spectrum analyzer and tracking generator or sweep generator and oscilloscope is required to achieve accurate adjustments.

It is **desirable** to change the BFO heterodyne crystals if the Collins SSB filter is installed. The replacement USB crystal frequency is 456.55kHz and LSB 453.45kHz.

Receive mode	original crystal	Collins filter crystal
USB	456.4kHz	456.55kHz
LSB	453.6kHz	453.45kHz

1. Remove the standard fitted Murata ceramic SSB filter and install the Collins SSB filter into the SSB position.

2. Fit the I.F. PCB back into place but do not re-fit the case at this time.

3. Switch the receiver to SSB.

4. Inject an unmodulated signal from a signal generator into the aerial socket.

5. Use the spectrum analyzer and tracking generator or sweep generator and oscilloscope to optimize the results.

6. Select the appropriate re-insertion points by pressing and holding the [3] key and pressing the RESET switch simultaneously. Release RESET SW followed by releasing [3] key to complete the frequency adjustment procedure.

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# AR3030 scan reset

1. Fill each memory with a frequency, it can be the same frequency so doesn't actually take too long, start at 00 and fill to 99 then re-fill 00 again. 2. Press [SCAN] [ATT] [0] [0] [.] [9] [9] [ENT]

That's it... Press [VFO] [SCAN] to start scan.

3. To clear all memory channels and reset unit press and hold [ENT] while powering the unit, do not release [ENT] key until 10.000 MHz is displayed on LCD.

If you have a Collins filter fitted, refer to the fitting sheet for initialization key sequence.

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