MANUFACTURERS AWA SUPERVISED SERVICE

TECHNICAL INFORMATION AND SERVICE DATA

A.W.A. RADIOLA
Television Receiver Chassis
DX-QZ Series

ISSUED BY AMALGAMATED WIRELESS (AUSTRALASIA) LTD.

Interim information covering modifications to the circuit and video i.f. alignment which are incorporated in the DX-QZ series chassis to give improved adjacent channel rejection.

Models incorporating this change will have a "V" suffix on their model designation as shown below.

MODEL AND CHASSIS DESIGNATION

Chassis	Model
DX—QZ—C	D4V
DX—QZ—F	D7V
DX—QZ—J	244V
DX—QZ—L	D12V, D14V
DX—QZ—M	D13V, D15V

MODIFICATIONS ARE:—

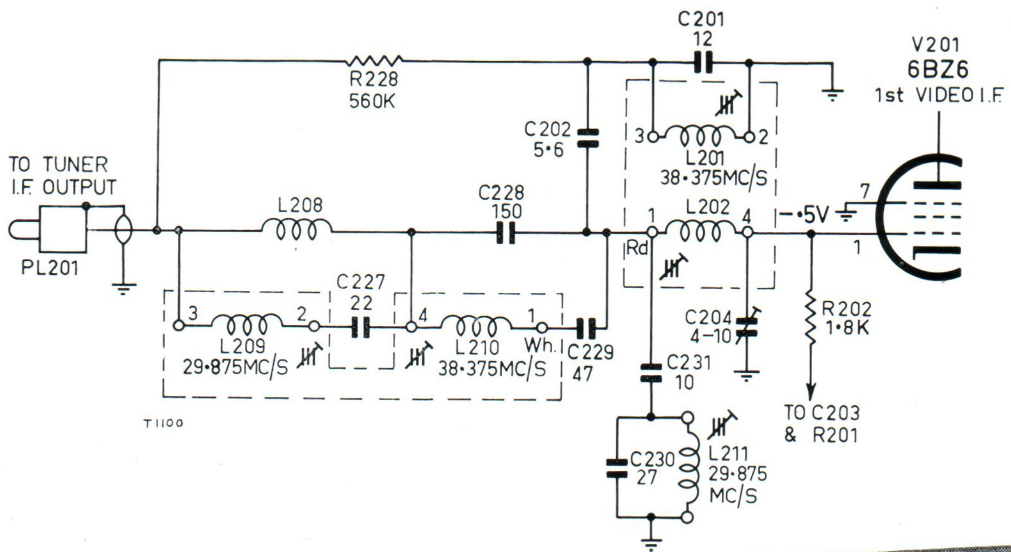
Components deleted:—

L201	38.375 Mc/s Trap	41405
L202	Video I.F. Input	41403
R210	8.2K ohms ± 5% ½ watt	611847

Components added as in the following circuit are:—

L201 and L202	38.375 Mc/s Trap and Video I.F. Input	43580
L208	Coil	43586
L209 and L210	29.875 Mc/s and 38.375 Mc/s Traps	43582
L211	29.875 Mc/s Trap	43584
C227	22pf ± 5% NPO tubular	220890
C228	150pf ± 5% 600VW plastic film	222688
C229	47pf ± 5% NPO tubular	221441
C230	27pf ± 5% NPO tubular	221071
C231	10pf ± 5% NPO tubular	220451
R202	1.8K ohms ± 5% ½ watt	609080
R228	560K ohms ± 10% ½ watt (BTS only)	617529
R210	10K ohms ± 5% ½ watt	612031

N.B. R202 was previously in L202 assembly.



NOTE: When two positions of the core appear to give the correct adjustments, the following apply:—

* Coil tuned with core close to chassis.

† Coil tuned with core close to can top, i.e., remote from chassis.

Make sure that bias voltages are correct, as incorrect voltages will lead to wrong adjustment.

When applying markers use smallest marker visible, otherwise response could be incorrectly displayed, i.e., removal of the marker generator should not change viewed shape of response.

Make sure that responses are viewed at correct output level as incorrect level will result in wrong adjustment. At lower levels detector non-linearity affects the shape, and at higher levels overload will alter the shape of the response.

VIDEO I.F. ALIGNMENT

Turn RV301 to its extreme clockwise position when viewed from the wiring side.

Connect the marker generator to TP2 on the tuner (this is at inductor segment L44 which is exposed through the large hole in the top of the tuner as is indicated in diagram in MF1 Series Tuner Service Manual).

Connect a source of bias to the video i.f. at the I.F. A.G.C. test point and to the tuner at the tuner a.g.c. terminal.

Set both r.f. and i.f. bias voltages at zero.

With the Voltohmyst set to —1.5 volts d.c. range connect the Voltohmyst d.c. probe to the video detector test point.

Set the tuner on Channel 6 with the fine tuning control at the low frequency end of its range (maximum clockwise on pre-set type and maximum anticlockwise on concentric type tuners).

Set the marker frequency at 29.875 Mc/s and adjust L209 (top core)† and L211† in turn for a minimum output, increasing the input to give a Voltohmyst reading of approximately —1.5 volts d.c.

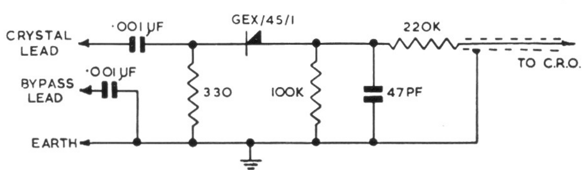


FIG. 1—CRYSTAL DETECTOR PROBE

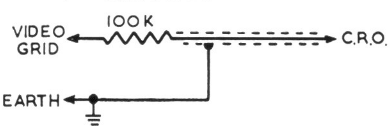


FIG. 2

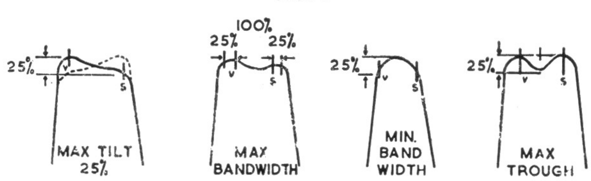


FIG. 3

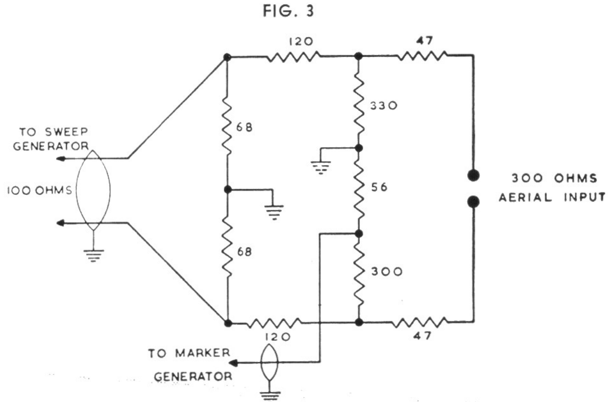


FIG. 4—INPUT PAD

Set the marker frequency at 38.375 Mc/s and adjust L201 (top core)† and L210 (bottom core)* in turn for a minimum output, increasing the input to give a Voltohmyst reading of approximately —1.5 volts d.c. Repeat this adjustment of L201† and L210* once.

Remove the Voltohmyst and the marker generator.

Reset the r.f. bias at —2 volts and the i.f. bias at —3 volts.

Connect the sweep generator to the aerial input terminals on the tuner and set both sweep generator and tuner to Channel 6.

Connect the c.r.o. vertical input to TP1 on the tuner through a shielded lead.

Check that the r.f. response viewed on the c.r.o. conforms with that shown in figure 3.

Note: In figure 4 is shown a suggested input pad and a way the marker generator can be connected for checking the tuner response.

Disconnect the c.r.o. from TP1 on the tuner and connect the crystal detector probe (figure 1) to pin 5 of V201 (1st video i.f. plate) and also by-pass pin 5 of V202 using by-pass lead provided.

Reset tuner oscillator frequency to 212.125 Mc/s ± 0.5 Mc/s using the fine tuning control. Set the sweep generator output to give maximum deflection on the c.r.o. of 0.3 volts p-p. It is suggested that the marker generator be connected to the centre spigot on the socket of V201 and the earth lead connected to the chassis.

Adjust TR2,* L202* and trimmer C204 to produce the response on the c.r.o. shown in figure 5.

TR2* mainly affects 36.875 Mc/s marker position.

L202* mainly affects tilt.

C204 mainly affects the band width.

Remove the crystal probe and connect the c.r.o. to the video detector test point using the network shown in figure 2. It is suggested that the marker generator remain connected to the centre spigot of V201 socket.

View overall response with approximately 3 volts p-p output and adjust the accompanying sound trap TR202 (top core)† for minimum response at 30.875 Mc/s increasing the c.r.o. gain if necessary for easier adjustment of the trap.

Reset the c.r.o. gain to give 3 volts p-p and adjust for a response as shown in figure 6.

Marker 36.875 Mc/s at 30% TR202.*

Marker 31.375 Mc/s at 4%-6% TR201.*

No tilt TR203.*

Check that 32.625 Mc/s marker is at 60%-75%, otherwise re-adjust TR201* and correct tilt with TR203* if necessary.

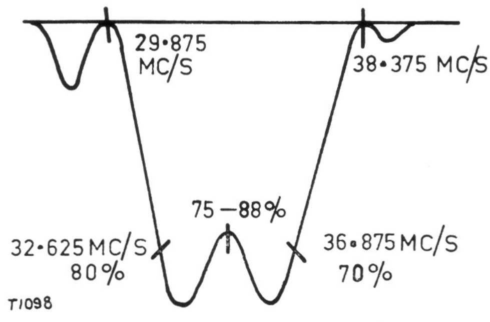


FIG. 5

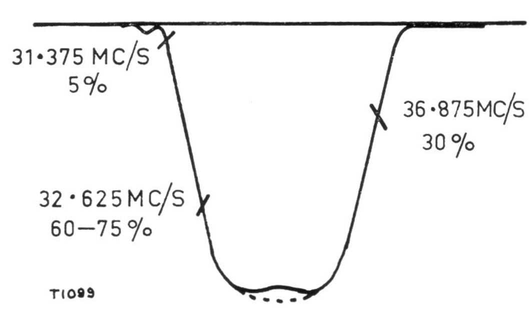


FIG. 6