

Eliminating Horizontal Pull

An article on horizontal-sync problems was published in the January issue of the SERVICE NEWS. One of the problems discussed results in an effect referred to as horizontal "pulling" or "wobble" as shown in Figure A-1.

Fundamentally the problem is due to an improper sync-to-video ratio in the transmitted signal. This condition occurs as a result of over-modulation of the transmitted signal.

All current Du Mont Telesets are designed for maximum sync-noise immunity. Under noisy receiving conditions, when other television receivers will jump sync, the picture on a Du Mont receiver will remain steady. To achieve this superior noise immunity, it is necessary to clip the sync pulses close to the pedestal or black level. If over-modulation occurs at the transmitter, the black level will extend into the sync region; consequently a portion of the video signal will be clipped with the sync pulses and will reach the input of the horizontal saw generator causing pulling or wobble in the picture. The immunity of a Teleset to the effects of over-modulation can usually be increased by aligning the narrow-band sync transformer, using the following procedure.

1. Turn the Teleset on and tune it to a station, preferably one on which horizontal pulling occurs.
2. Connect an oscillograph to the plate of the first sync-amplifier stage.

Note: An oscillograph with good high-frequency response such as the Du Mont 224 or 241 should be used. The Du Mont 304H may be used although the results obtained may not be as accurate.

3. Adjust the frequency controls on the oscillograph to obtain a complete field on its screen; that is, two

vertical sync pulses as shown in figure A-2.

4. Set the contrast and brightness controls to obtain a normal picture and adjust the a-g-c control until the picture brightens up. This will usually cause video to appear at the plate of the first sync amplifier, as shown in figure A-2.
5. Vary the adjustments at the top

and bottom of the narrow-band sync transformer until the video in the sync is eliminated, as observed on the oscillograph. When this adjustment has been made properly, the oscillograph pattern should appear as shown in figure A-3.

6. Repeat step 4 causing the video to again appear in the output of the first sync amplifier and repeat step

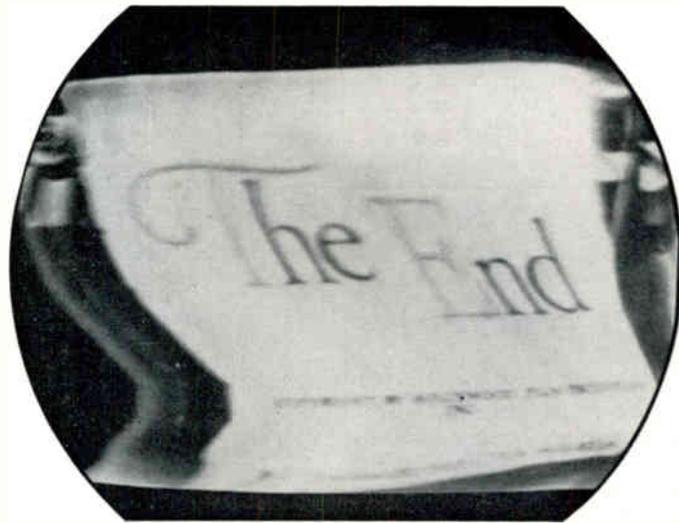


Figure A-1. Horizontal pull.

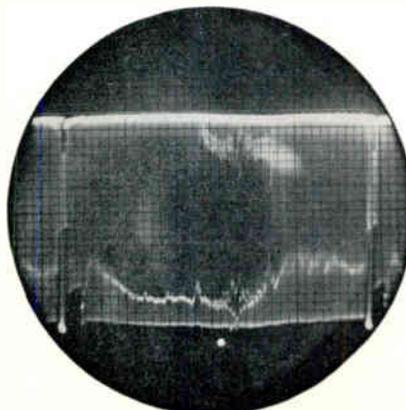


Figure A-2. Output of first sync clipper showing video in sync.

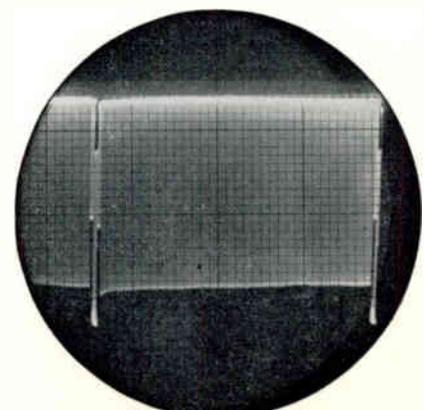


Figure A-3. Output of first sync clipper with narrow-band transformer properly adjusted.

5 to eliminate it. Continue repeating steps 4 and 5 until it is no longer possible to eliminate the video in the output of the first sync amplifier by tuning the narrow-band sync transformer.

After this procedure has been completed, a greater range of a-g-c adjustment, without horizontal pulling, will be available.

When installing the Teleset, adjust the a-g-c control by turning it first in one direction until a point is reached where pulling starts to occur. Then turn the control in the opposite direction until the point is reached where pulling again occurs. Set the control mid-way between these two points. If both weak and strong signals are received at the location where the Teleset is installed, the adjustment should be made carefully to prevent a reduction in sensitivity on weak stations.

Recently, a production change was made in all Telesets to reduce the possibility of pull and wobble. This change consisted of replacing the un-bypassed 270-ohm resistor in the cathode circuit of the 6BA6 narrow-band sync amplifier with a 470-ohm unit.

If the receiver experiencing the difficulty does not already include the 470-ohm resistor, the change should be made.

If changing the above resistor and readjusting the narrow-band sync transformer does not completely eliminate the horizontal pulling, short the 10K resistor (R284) located in the output of the sync detector. This permits the signal to produce a larger bias across C249, the coupling capacitor. The increased bias depresses the pedestal and video level of the signal to below cutoff. This prevents the video signal from entering the sync circuits and eliminates the horizontal pulling.

Unfortunately, when R284 is shorted, the noise immunity of the Teleset is somewhat impaired. With R284 in the circuit, the discharge path of C249 is through R284 and the grid-to-cathode resistance of V219. The time constant, which exists under these conditions, is such that frequencies higher than those involved in a satisfactory sync pulse are attenuated. Since most noise occurs at these higher frequencies, a considerable improvement in noise immunity is obtained. When R284 is shorted out, only the grid-to-

cathode resistance of V219 remains in the discharge path of C249. As a result the time constant of the coupling circuit is changed, permitting noise signals to develop greater amplitudes at the grid of V219. Consequently noise pulses are able to drive the grid beyond cutoff which results in loss of sync. From the above discussion it is obvious that if a Teleset displays horizontal pull due to over-modulation at the transmitter, resistor R284 should not be shorted unless the noise level is low enough to allow satisfactory sync locking with the resistor out of the circuit. To enable the technician to perform this operation conveniently, two jacks have recently been added to all chassis. Size 12 wire should be used as a jumper between these jacks. This change has been incorporated in all Telesets starting with the serial numbers listed below.

RA-112A—No. 1252325—coded AC
 RA-113 —No. 1351175—coded AC
 RA-117A—No. 1710886—coded E
 RA-109A—No. 0952654—coded M
 RA-116A—No. 16276 —coded M

See Production Changes in this issue.

Du Mont Teletron Warranty

From time-to-time the Teleset Service Control Department receives questions regarding the warranty of Du Mont Teletrons. The information which follows is given in the hope that it will clarify the terms of the warranty for those readers who do not have a clear understanding of them.

As you know Du Mont Teletrons are sold as part of new Telesets and separately, for replacement and other purposes. Cathode-ray tubes in new Telesets and those sold separately are covered by different warranties. As of November 1, 1950, the warranty for tubes sold for replacement or other purposes was changed. Such tubes are warranted to be free from defects in workmanship and material under normal use and operating conditions. Du Mont, at its own expense, will repair or replace any tube sold by it which shows such defects within six months from its factory shipment date, under the conditions set forth in the "War-

ranty on Television-Type Cathode-ray Tubes."

The warranty on cathode-ray tubes in *new Du Mont Telesets* has not been changed. These tubes are warranted for one year from the date of purchase of the Teleset, under the conditions set forth in the "Warranty for Your Du Mont Teleset and Teletron"; mailed to each purchaser of a Du Mont Teleset. If the tube in a new Teleset shows a defect 10 months after the Teleset is installed it will be replaced. If the replacement shows a defect three (3) months later the customer must pay for a new tube, since the tube became defective one month after the expiration of the warranty period.

Troubleshooting Hints

Teleset: All

Symptom: Flashing on screen.

Probable Fault: The cover of the yoke connector is intermittently contacting the focus-coil case. While both

are grounded, there is enough potential difference between them to cause the above difficulty.

Remedy: Redress the yoke cable.

Teleset: RA-116A

Symptom: Tape breaks when starting or stopping the Tape Recorder.

Probable Fault: One or both of the take-up drive clutch assemblies are too tight. This difficulty usually occurs in the first month or two of operation, during which time the clutch pressure may gradually increase.

Remedy: Readjust the clutch pressure as described in the Tape Recorder Manual.

Teleset: RA-116A

Symptom: The tape recorder's re-winding speed is too slow.

Probable Fault: One or both of the take-up drive clutch assemblies are too loose. This difficulty usually occurs in the first month or so of use.

Remedy: Readjust the clutch pressure as described in the Tape Recorder Manual.

Re-calibrating the RA-117A Tuner

Aging of components or replacement of the oscillator tube in the Selectuner may cause the proper tuning point, for each channel, to fall out of the range of the detent. When this condition is encountered, the following procedure should be followed to correct it:

1. Turn the Teleset on and tune it to the highest channel in use in the area in which it is installed.
2. Remove the tuning knob and the channel indicator dial and readjust the tuning until proper tuning indication is obtained.

Caution: Do not carry or tune the Selectuner using the channel indicator dial.

3. Observe the position of the detent for the channel to which the Teleset is tuned, with respect to the detent spring, C in figure S1. The detent spring should be centered in the proper detent.

Note: With proper calibration the clutch stop (A) will not necessarily be centered when the Teleset is tuned to channel 9. Therefore, it is not advisable to use this channel as a reference.

4. If the position of the detent is incorrect, loosen the two Phillips screws (D) on the front of the clutch disc one-half turn; while holding the detent disc in position.

Caution: Do not disturb the Phillips screws fastening the top section of the Selectuner to the Inductuner.

5. Rotate the detent disc until the detent spring is centered in the proper detent.
6. Rotate the clutch disc until the stop is centered in the slot, when the tuning indicator shows proper tuning.
7. Tighten the two Phillips screws and make a final check of the dial calibration on all stations.

If it is impossible to obtain proper calibration on all stations using the above procedure, the oscillator tracking adjustment may be off or the gear train in the tuner may have been damaged. A quick check of the calibration may be made by tuning to channel 13. If the gear train is properly engaged and the calibration is approximately correct, the flat (E) on

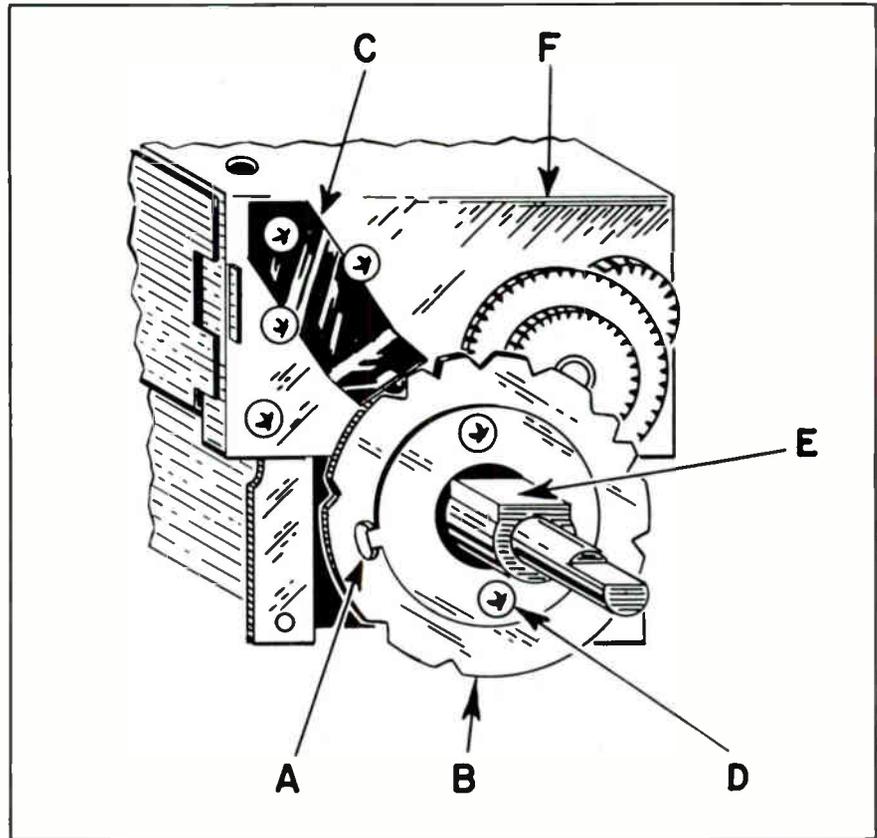


Figure S-1. RA-117A Selectuner.

the shaft, extending through the detent disc, will be up and approximately parallel with the top of the chassis (F). Damage to the gear train can result if the channel indicator dial is used as a knob. The gear train in the Selectuner is sturdily constructed and will give long, trouble-free perform-

ance in normal usage; however, some possibility of damage to the gear train exists if sufficient turning force is exerted on the channel indicator dial.

If the gear train in the Selectuner has been damaged, the unit should be returned to your distributor for exchange.

Filters and Traps Available

The following filters and wave traps, for use with Du Mont Telesets, are now available.

USE	TYPE	PART NUMBER
FM trap	88-108mc	
	Straight type for RA-103C, D, 104A & 110A	21005881
	L type for RA-105A, B, 106 & 108A ..	21005891
<i>(See page INS-10B in the Service Notes.)</i>		
FM filter	88-108mc, "M" derived band elimination filter	88000301
<i>(See page INS-10E in the Service Notes.)</i>		
Amateur band filter	High-pass filter, cut off at 40mc	88000331
<i>(See page INS-11 in the Service Notes.)</i>		
Channel 5 trap	Tweet trap for RA-112A — 113	21007131
	<i>(See page 112-5i in the Service Notes.)</i>	21005411
Channel 5 trap	Tweet trap for RA-104A — 110A	21005411
Horizontal sweep radiation filter	Low-pass filter	21007021
<i>(See Troubleshooting Hints in this issue.)</i>		

PRODUCTION CHANGES

RA-109A

Change No. 38 (ECN-4676)

Reason:

Resistor R238 was changed from a half-watt to a one-watt unit to eliminate the possibility of breakdown due to overheating.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
R238	02034990 02044990 02054990	Res F C 68K 10% 1W

The first chassis to incorporate this change was:
RA-109A — No. 0949049

Change No. 39 (ECN-4683)

Reason:

The addition of a video output jack to provide for use of the receiver with a color converter.

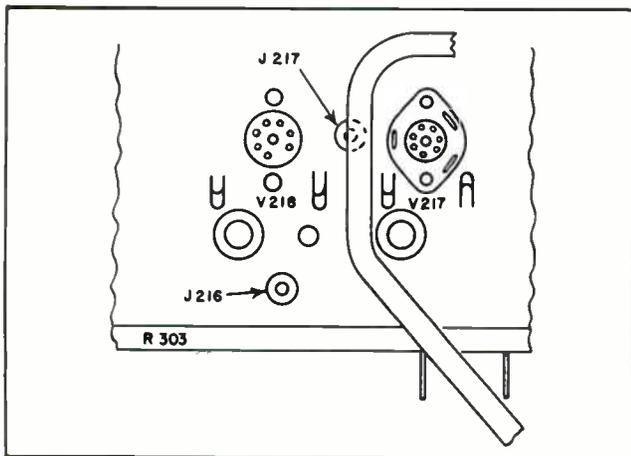


Figure P-1. Change No. 41, RA-109A.

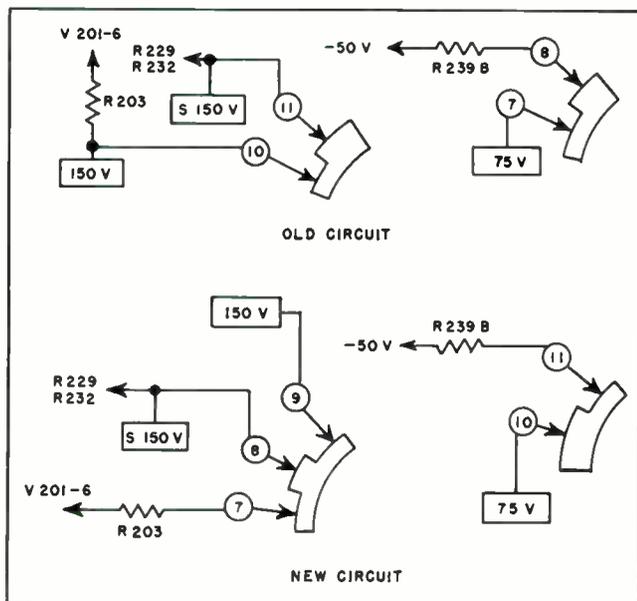


Figure P-2. Change No. 39, RA-112A - RA-113.

Procedure:

1. Mount J209 near V213.
2. Ground outer conductor of J209.
3. Connect C338 between V213-7 and the inner conductor of J209.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
C338	03019260	Cap F Pa .1 mf 20% 400V
J209	09002760	Connector female 1 contact

The first chassis to incorporate this change was:
RA-109A — No. 0943922
All chassis so modified are coded "K".

Change No. 40 (ECN-4798)

Reason:

To improve the effectiveness of the narrow-band sync and a-g-c stages. This is accomplished by a redesign of Z210, the narrow-band sync transformer. The new transformer has a higher secondary to primary turns ratio and a higher L/C ratio than the former part. As a result the transformer gain is greater. Since the new transformer has a higher Q, a larger load resistor is required. To maintain the same RC ratio obtained with the previous transformer, C306 has been changed.

Procedure:

1. Change Z210
2. Change R275
3. Change C306

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
C306	03015790 03020350	Cap F Ce 20 mmf 10% 500V
R275	02031940 02041940 02051940	Res F C 27K 10% 1/2W
Z210	20006231	Trans narrow band sync

The first chassis to be so modified was:
RA-109A — No. 0952654
All chassis so modified are coded "M".

Change No. 41 (ECN-4809)

Reason:

To reduce horizontal pulling, two jacks are provided as described in the article entitled "Eliminating Horizontal Pull," in this issue.

Procedure:

Mount the two jacks, J216 and J217 as shown in figure P1.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
J211	09019870	Connector female 1 contact
J217	Same as J216	

This change was first incorporated in chassis:
RA-109A — No. 0952654
All chassis so modified are coded "M".

RA-112A — RA-113

Change No. 39 (ECN-4529)

Reason:

To eliminate f-m pickup when the Teleset is being used for phonograph reproduction. This pickup occurs in areas where very strong f-m signals are present and is coupled to the first sound amplifier through the stray capacitance of S201. A position is added to this switch to remove the B+ from the screen of the first sound i.f., V201.

Procedure:

Replace and rewire S201 as shown in figure P2. Connections not shown remain the same.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
S201	05004511	Switch Service Selector

The first chassis to incorporate this change are listed below:
 RA-112A — No. 1239006
 RA-113 — No. 1343368
 All chassis so modified are coded "A-A".

Change No. 40 (ECN-4690)

Reason:

To obtain maximum sensitivity when receiving f-m stations in areas where both extremely strong and weak signals are received. If both strong and weak f-m signals are present at the antenna terminals of the Teleset, it is possible for a strong signal to reduce the gain of the receiver when it is tuned to a weak signal. When this occurs, the reduction in gain may be sufficient to make satisfactory reception of the weak signal impossible.

The above condition can occur if a strong signal is close enough in frequency, to a weak signal so that both signals fall within the pass band of the r-f and video i-f stages, when the receiver is tuned to the weak signal. The strong signal will pass through these stages to the grid of the third video i.f., V207. If the amplitude of the strong signal is great enough, the grid of V207 will be driven positive causing it to draw current. This current will flow through resistors R223, R319 and R251. The voltage developed, by this current, across R319 and R251, appears on the a-g-c line and is applied to the grids of the r-f amplifier (V101), and the 1st and 2nd sound i-f amplifiers (V201 and V202). Since this voltage is negative, it increases the bias on these stages and reduces the gain of the receiver. To eliminate this effect, the grid circuit of the third video i-f stage is disconnected from the a-g-c line when the Selector Switch is in the FM position. To accomplish this, a new Selector Switch is required.

Procedure:

1. Change S201
2. Disconnect R223 from junction of C226 and R319 and connect this end to S201-12, as shown in figure P3.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
S201	05004661	Switch Service Selector

The first chassis to incorporate this change are listed below:
 RA-112A — No. 1239006
 RA-113 — No. 1343368
 All chassis so modified are coded "A-A".

Change No. 41 (ECN-4750)

Reason:

To eliminate a pattern of fine diagonal lines, referred to as "snakes," which sometimes occurs on channel 8 in receivers equipped with a channel 5 trap. This interference is caused by the seventh harmonic (183.75 mc) of the video i.f. (26.25 mc) and the video carrier of channel 8 (181.25 mc) which combine to produce a 2.5 mc beat.

Procedure:

Add a 2.5 mmf capacitor between pin 7 of V209A, the video detector, and ground, in parallel with L219 and C227, the 78.75 mc trap.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
C220	03015240	Cap F Ce 2.5 mmf 10% 500V

The first chassis to incorporate this change were:
 RA-112A — No. 1246882
 RA-113 — No. 1348066

Change No. 42 (ECN-4798)

Reason:

Same as RA-109A, Change No. 40.

Procedure:

1. Change R249
2. Change C236
3. Change Z209

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
C236	03015790	Cap F Ce 20 mmf 10% 500V
	03020350	
R249	02031940	Res F C 27K 10% 1/2W
	02041940	
	02051940	
Z210	20006231	Trans narrow band sync

The first chassis to be so modified were:

RA-112A — No. 1252325
 RA-113 — No. 1351175

Change No. 43 (ECN-4809)

Same as RA-109A, Change No. 41 except symbols of two jacks are J206 and J207.

The first chassis to incorporate this change were:

RA-112A — No. 1252325
 RA-113 — No. 1351175

All chassis so modified are coded "A-C".

Change No. 45 (ECN-4799)

Reason:

To eliminate interference on channel 10 which sometimes occurs when the ninth harmonic of the audio i-f carrier (21.75 x 9 = 195.75) is radiated and beats with the video carrier of channel 10 (193.25) (195.75 -193.25) to produce a 2.5 mc beat.

Procedure:

1. Add C307 between V201-4 and ground, keeping the leads 1/2" long.
2. Add C308 between V203-9 and ground, keeping the leads 1/2" long.
3. Add C309 between V203-6 and ground, keeping the leads 1/2" long.
4. Add L207 between V203-6 and the junction of R265 and R318.
5. Remove the black wire to V203-7 and reconnect it to the ground tab near V204-4.
6. Remove the ground wire to V203-7. Bend pin V207-7 down and solder it to the side of the tube socket.
7. Remove the ground wire from V203-5. Bend pin V203-5 down and solder it to the side of the tube socket.
8. Solder tube socket V203 to the chassis.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
C307	03015300	Cap F Ce 47 mmf 10% 500V
	03012730	
	03104460	
C308	Same as C307	
C309	Same as C307	
L207	21007241	Coil Choke

This change was first incorporated in chassis:

RA-112A — No. 1253897
 RA-113 — No. 1351039

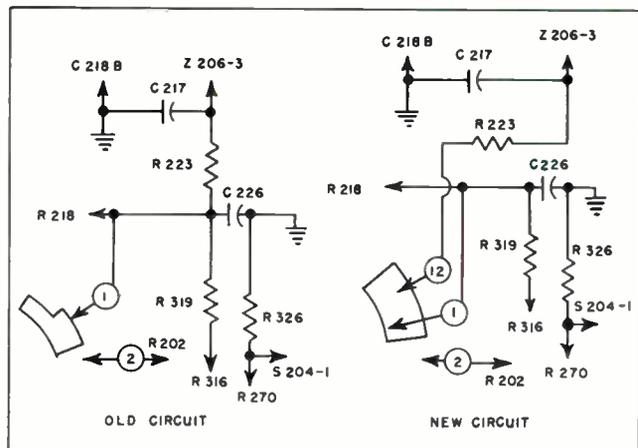


Figure P-3. Change No. 40, RA-112A - RA-113.

Production Changes (Cont'd)

RA-112A

Change No. 44 (ECN-4624)

Reason:

Sufficient 15KC sweep signal reaches the grid circuit of the vertical blocking oscillator to cause it to fire irregularly. The changes below offer a very low grid impedance to the 15KC signal thus alleviating this condition.

Procedure:

1. Rewire the socket of V220 to reverse the two halves of the 6SN7.

V220-B	from	to	V220-A	from	to
	1	4		4	1
	2	5		5	2
	3	6		6	3
2. Shield the wire connecting R292 to R293. Connect the shield to the -50V line and cover it with tape or spaghetti to prevent the possibility of shorting the -50V line to ground.
3. Disconnect C271 (near T203) and reconnect it in series with the yellow lead of T203 and the junction of C267 and R291.
4. Connect the free end of R293 to the junction of C271 and the yellow lead of T203.
5. Connect the green lead of T203 to V220B-4.
6. Add C258 between the green lead of T204 and ground.
7. Disconnect the end of R294 connected to the line between V220B-5 and the junction of R296 and C268. Reconnect R294 directly to V220B-5.
8. Shield the line from V220B-5 and the junction of R296 and C268, grounding the shield.
9. Shield the red, yellow and green leads of T203, connecting the shields to ground.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
C258	03014770	Cap F Pa .1 mf 20% 400V
	03100130	

The first chassis to incorporate this change was:
 RA-112A — No. 1243110
 The chassis so modified are coded "A-B".

RA-113

Change No. 46 (ECN-4675)

Reason:

To prevent the dial light from reflecting across the cathode-ray tube, a light shield is added.

Parts Required:

PART NUMBER	DESCRIPTION
42004142	Shield Light

RA-116A

Change No. 2 (ECN-4676)

Same as RA-109A, Change No. 38.

Change No. 3 (ECN-4683)

Same as RA-109A, Change No. 39
 This change has been incorporated in all RA-116A Chassis.

Change No. 4 (ECN-4798)

Same as RA-109A, Change No. 40
 The first chassis to be so modified was:
 RA-116A — No. 16276
 All chassis so modified are coded "M".

Change No. 5 (ECN-4809)

Same as RA-109A, Change No. 41
 The first chassis to incorporate this change was:
 RA-116A — No. 16276
 All chassis so modified are coded "M".

RA-117A

Change No. 4 (ECN-4700)

Reason:

To reduce stray coupling which results in one-sided eye deflection.

Procedure:

1. Disconnect C201 from V201-2 and reconnect it to Z201-2.
2. Disconnect C202 from V201-3 and reconnect it straight to ground.
3. Disconnect C206 from V202-3 and reconnect it straight to ground.
4. Disconnect R201 from V201-2 and reconnect it straight to ground.
5. Disconnect R274 from V202-2 and reconnect it straight to ground.
6. Disconnect C281 from V201-6 and reconnect it straight to ground.
7. Dress all leads in the vicinity of the corner of the Selectuner chassis, near V204, as far away from the lead coming from the tuner to C301 as possible.

The first chassis to incorporate this change was:
 RA-117A — No. 17471

Change No. 5 (M-215)

Reason:

To decrease the possibility of vertical drift due to C271 changing value, C271 (near T203) is changed from a 400V to a 600V unit.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
C271	03101540	Cap F Pa .01 mf 5% 600V

The first chassis incorporating this change was:
 RA-117A — No. 17633

Change No. 6 (ECN-4685)

Reason:

To eliminate a pattern of streaks which sometimes appears on channel 7. This pattern is caused by the eighth harmonic of the sound carrier (21.75 x 8 = 174) which is produced in the audio discriminator. It feeds into the video i-f strip through the a-g-c circuit (the a-g-c clamping and the discriminator diodes are located in the same tube) and beats with the video carrier to produce the above effect.

Procedure:

1. Add C208 from V203-4 to ground.
2. Add L207 in series with V203-6 and the junction of R265 and R318, near V212.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
C208	03015610	Cap F Ce 5000 mmmf min
L207	21007241	Coil Choke, grey-yellow

The first chassis incorporating this change was:
 RA-117A — No. 173081

Change No. 7 (ECN-4731)

Reason:

To reduce difficulties with neck cut-off.

Procedure:

Reverse the focus-coil leads.
 The first chassis incorporating this change was:
 RA-117A — No. 172985

Change No. 8 (ECN-4735)

Reason:

To improve the overall bandpass of the i-f strip by reducing the "valley" between the two peaks.

Procedure:

Change R332 near V205 from 5.6K to 2.7K.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
R332	02030580	Res F C 2.7K 5% 1/2W

The first chassis incorporating this change was:
RA-117A — No.173000

Change No. 9 (ECN-4750)

Same as RA-112A — RA-113, Change No. 41.

The first chassis incorporating this change was:
RA-117A — No. 177990

Change No. 10 (ECN-4799)

Same as RA-112A, Change No. 43

The first chassis to incorporate this change was:
RA-117A — No. 1712365
All chassis so modified are coded "F".

Change No. 11 (ECN-4624)

This change has already been incorporated in the first edition of the RA-117A Schematic Sheet. Same as RA-112A, Change No. 45.

The first chassis to incorporate this change was:
RA-117A — No. 176676
All chassis so modified are coded "D".

Change No. 12 (ECN-4686)

Reason:

To provide a video output jack to provide for future use of a color converter.

Procedure:

1. Add J205
2. Connect C225 between the center conductor of J205 and the junction of R237, R239A and C276.
3. Ground the outer terminal of J205.

Parts Required:

SYMBOL	PART NUMBER	DESCRIPTION
C225	03014770	Cap F Pa .1 mf 20% 400V
	03100130	
J205	09002760	Connector female 1 contact

The first chassis to be so modified was:

RA-117A — No. 173419
All chassis so modified are coded "C".

Change No. 13 (ECN-4809)

Same as RA-109A, Change No. 41 except symbols of two jacks are J206 and J207.

The first chassis to incorporate this change was:

RA-117A — No. 1710886
All chassis so modified are coded "E".

Change No. 14 (ECN-4798)

Same as RA-112A — RA-113, Change No. 42.

The first chassis to be so modified was:

RA-117A — No. 1710886
All chassis so modified are coded "E".

Changers and Cartridges Used In Du Mont Telesets

DU MONT TELESET	CHANGER		CARTRIDGE	
	MANUFACTURER & MODEL	DU MONT PART NO.	MANUFACTURER & MODEL	DU MONT PART NO.
Sherwood, Plymouth, Westminster I, Savoy, Revere, Devonshire	Webster-Chicago Model 100	69-1, 69-2, 19034351	Astatic Nylon (199) 1J	19034360
Savoy, Colony	Webster-Chicago Model 256	19034401	Webster-Chicago V42-2	19034450
Bradford (early)	Crescent 6- Series, 45 RPM	19034491	Sonotone W-7530	19034510
Bradford (late)	Webster-Chicago Model 77	19034521	Sonotone W-7530X	19034530
Wellington	V-M Corp Type 407	19034541	Astatic LQD-1J	19034560
Sherbrooke	Webster-Chicago Model 100	19034581	Webster Electric A7-8	19034630
Sherbrooke	Webster-Chicago Model 100	19034582	Sonotone W-7580 or RW-13007	19034640
Westminster II	Webster-Chicago Model 100	19034611	Sonotone W-7580 or RW-13007	19034640
Tarrytown	V-M Corp 560	19034591 19034592 19034593	Webster Electric A-1-8	19034670

PARTS LIST CHANGES

RA-109A — RA-116A Main Chassis Parts List

Add:
 J216 09019870 Connector Female 1 contact
 J217 09019870 Connector Female 1 contact

RF Tuner Assembly Parts List

Delete:
 V102 89003011 Inputuner Assy
 25000180 Tube Elec 6AK5

Add:
 V102 89003013 Inputuner Assy
 25002020 Tube Elec 6BC5

RA-112A Miscellaneous Parts List

Delete:
 41001951 Sleeve Insulating

RA-113 Miscellaneous Parts List

Delete:
 34002378 Socket Assy CRT

Add:
 34002379 Socket Assy CRT
 42004142 Shield Light

RA-112A — RA-113 Main Chassis Parts List

Delete:
 C228
 C298
 C299
 S201
 Z203
 Z205
 Z206
 Z207
 Z208

64003221 Dial Bezel

Add:
 C220 03015240 Cap F Ce 2.5 mmf 10% 500V
 C228 03021840 Cap F M 47 mmf 10% 500V
 03012730
 03015300
 C236 03015790 Cap F Ce 20 mmf 10% 500V
 C258 03014770 Cap F Pa .1 mf 20% 400V
 03100130
 C298 03020080 Cap F M 47 mmf 10% 500V
 03015300
 03012730
 C301 03055680 Cap F Ce 100 mmf 10% 500V
 C307 03015300 Cap F Ce 47 mmf 10% 500V
 C308 03015300 Cap F Ce 47 mmf 10% 500V
 C309 03015300 Cap F Ce 47 mmf 10% 500V
 J206 09019870 Connector Female 1 contact
 J207 09019870 Connector Female 1 contact
 R249 02031940 Res F C 27K 10% 1/2W
 S201 05004661 Switch Service Selector
 Z203 20005271 Trans Sound Discriminator
 20005831
 Z205 20005781 Trans Video IF
 20004741

Z206 20005801 Trans Video IF
 20005711
 Z207 20005791 Trans Video IF
 20004751
 Z208 20005821 Trans Video IF
 20005241
 Z209 20006231 Transformer Narrow Band Sync
 45002491 Window, Dial
 64004061 Dial Bezel

RF Tuner Assembly Parts List

V102 25002020 Tube Elec 6BC5
 25002760

RA-116A Miscellaneous Parts List

Delete:
 R401

Add:
 R401 02037840 Res F C 3.9K 10% 2W

RA-117A Main Chassis Parts List

Delete:
 C228
 C271
 C298
 C299
 R213A-B
 R239A-B
 R332
 Z203
 Z205
 Z207
 Z208

Add:
 C208 03015610 Cap F Pa 5000 mmf min
 C228 03021840 Cap F M 47 mmf 10% 500V
 03012730
 03015300
 C258 03014770 Cap F Pa .1 mf 20% 400V
 03100130
 C271 03101540 Cap F Pa .01 mf 5% 600V
 C298 03020080 Cap F M 47 mmf 10% 500V
 03015300
 03012730
 J206 09019870 Connector Female 1 contact
 J207 09019870 Connector Female 1 contact
 L207 21007241 Coil, Choke, grey-yellow
 R213A-B 01028210 Res Var C 50K-1 meg SPST 1/4W
 R239A-B 03101340 Res Var C 1K - 100K 1/4W
 03103590
 R332 02030580 Res F C 2.7K 5% 1/2W
 Z203 20005271 Trans Sound Discriminator
 20005831
 Z205 20005781 Trans Video IF
 20004741
 Z206 20005801 Trans Video IF
 20004711
 Z207 20005791 Trans Video IF
 20004751
 Z208 20005821 Trans Video IF
 20005241

Errata

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- Page 4, RA-109A, Change No. 35, Procedure, Step 5, second line should read: "and reconnect it to the junction of C255 and the yellow lead of T201."
- Page 6, "Substituting the 17BP4A CRT," line 3 should read: "coating. Since the 17BP4A is slightly longer . . ."
- Page 8, "Video Peaking Coil Characteristics."
 Heading "Inductance in Millihenries" should be: "Inductance in Microhenries."