

DUMONT

First with the Finest in Television

SERVICE NOTES

FOR

DU MONT TELESETS



ALLEN B. DU MONT LABORATORIES, INC.

Teleset Service Control Department

MARKET STREET

EAST PATERSON, N. J.

General

Index General Section

<u>Item</u>	<u>Page</u>
Cabinet Repairs	3
Cathode-ray Tube Replacement	11
Chassis Hold Down Bolts	8
Cleaning the Teleset	2
Du Mont Failure Report	7
Installation and Handling of 19AP4 Picture Tube	4, 5 (1/13/50)
Maintenance of Du Mont Telesets in Public Places	1
Replacement Slugs for Horizontal Oscillator Transformers	2
Safety for TV Servicemen	6
Service Binder	9,10
Stolen Telesets	7

GENERAL INFORMATION

MAINTENANCE OF DU MONT TELESETS IN PUBLIC PLACES

DEALERS PLEASE NOTE

From time to time complaints reach top management in Du Mont, of improper operation of Du Mont Telesets which have been installed in public places such as clubs, bars, restaurants, fire houses and hotels.

Many of these cases investigated show very little wrong with either the set or the installation and a simple adjustment is sometimes all that is required to restore the set to perfect operating condition. In other cases, the installation itself is inadequate to provide proper operation due to the location or other reasons.

Periodically, dealers and service organizations have been cautioned to make every effort to insure that all installations are properly made and that set owners are instructed in the proper use of their sets. The most important types of installation, however, from an advertising standpoint, good or bad, are those located in the types of public places mentioned above. Thousands of persons view these receivers in a comparatively short period of time and their impression of the particular set which they view unconsciously creates a lasting prejudice for or against the manufacturer of the particular set.

Since the company and the dealers themselves spend thousands of dollars in advertising, it should be self-evident that every effort should be made to see that these installations are made as carefully as possible and that a periodic check is made of the operation of the set in order to make whatever minor adjustments may be necessary to keep the set at its peak of performance.

All dealers and service organizations are strongly urged to check through their lists of television sets which they have sold and installed in these types of places, and endeavor to make occasional visits to the installations to determine their condition. Such visits can, by careful planning of the routing supervisor, be included in regular trips for installations or complaints in the vicinity. The results which will be obtained from such maintenance checks cannot be overestimated and will undoubtedly save money and time by the elimination of unnecessary complaint calls or serious complaints which may arise from minor defects having been permitted to exist over a long period of time. Since commercial installations are charged for at a higher rate than standard installations the service organization can well afford to give this special type of service which will be of benefit both to the set owners, the servicemen, as well as the dealers and Du Mont.

REPLACEMENT SLUGS FOR HORIZONTAL OSCILLATOR TRANSFORMERS

Breakage of the top slug (frequency adjustment) of the horizontal oscillator transformers has been the cause of the majority of defects in this circuit. It is not necessary to replace the entire transformer as replacement slugs are available from our Spare Parts Department. In the event the top slug is broken which is usually the case, it may be replaced by simply removing the shield can and taking out the slug. If the bottom slug is broken it will be necessary to disconnect the wires on the bottom of the transformer to make the replacement.

In either event it would be more economical to make the replacement of the slug than to replace the whole transformer. The part number for these slugs is 55002340. The price of these slugs is \$0.07 to dealers and service organizations.

CLEANING THE TELESÉT

The inside of a Teleset is a choice location for dust and dirt to settle. Accumulation of dust allowed to remain any length of time, becomes a very real enemy to the operation of the television receiver. The danger is more imminent when the weather becomes very humid. Obviously, in those parts of the country where the humidity is always high, the importance of keeping the set clean is naturally greater.

It is suggested that in order to avoid some unnecessary service calls in the future, all service organizations consider making a routine cleaning check on their customers' sets. While your first thought may be that this will involve an additional and unnecessary expense, second thought should convince you that the elimination of calls and replacements in the future will more than compensate for the time and bother involved.

It is suggested that all chassis be thoroughly cleaned and loose dust and dirt removed therefrom either by a compressed air jet or by a small portable vacuum cleaner attachment. Particular care should be used to avoid breaking of wires or loosening of connections during the process.

In cleaning Chatham or Savoy Telesets particular care should be given to the cathode-ray tube face. In these sets a fiber mask, rather than a soft rubber mask, is used and unless the tube is in close contact with the mask, dust and dirt can filter in between the safety glass and the face of the cathode-ray tube. As the cathode ray tube carries a heavy static charge, it acts as a dust precipitator and in the course of time becomes covered with a thin layer of dust. This film of dust reduces the brilliance and clarity of the picture. The tube face should be carefully cleaned, therefore, and in replacing the chassis care should be taken to have the tube face in good contact with the mask. The effect of the removal of the dust film from the face of the tube will be surprising and you will find the improvement in brilliance and clarity will be well worth the trouble involved.

Particular attention should be paid to the cleaning of sets in bars and taverns as the smoke which is prevalent in those establishments is laden with nicotin which causes a yellowish coating on the safety glass and, in some cases, the tube face itself. For tavern or restaurant installations it is also recommended that scotch tape is used to seal the inductunor case of the inputuner. Sealing the edges of the shield will prevent the grease from getting into the coil section.

After cleaning the RA-105 Telesets, special care should be exerted when returning the cathode-ray tube to the cabinet after cleaning.

The CRT faces in the RA-105 get dirty quite readily because in many cases the tube assembly was not pushed far enough forward in the cabinet. As this assembly rides on a track, it must be pushed all the way forward on the track so the front of the tube assembly touches the glass, otherwise the tube will get dirty.

Any chassis which is covered with a layer of dust at the beginning of a humid season is a perfect set up for possible corona and high voltage breakdowns. The dust particles absorb moisture from the atmosphere and thus present breakdown paths between terminals or exposed connections. The combination of high humidity, high voltage, and a layer of dust can bring about sericus results. Keep your service and replacement costs down by a thorough cleaning, especially in the spring.

CABINET REPAIRS

The wax bags used in packing our Telesets, have on occassions caused slight polish marks. These "wax spots" as they are sometimes called can be readily removed by the following methods:

1. Use of rotten stone and oil or water rubbing lightly with the grain.
2. Use of Johnson's new liquid cream wax polish.
3. Use of simonize cleaner rubbing lightly with the grain.
4. Use steel wool, size #0000, only by an experienced polisher.

Methods one, three and four will give a satin finish and two will give a high gloss. The removing of the above spots is to be done by the dealer and these marks are not to be considered as cabinet defects.

INSTALLATION AND HANDLING OF TYPE 19AP4 TELEVISION PICTURE TUBE

Anti-Corona Coating

An anti-corona coating has been placed on the glass funnel and neck to give satisfactory operation under conditions of high humidity. Avoid handling the tube by the neck and funnel. Moisture and salts from the hands will lessen the effectiveness of the coating. If the coating becomes dirty or contaminated, wash with water or mild soap and water. Make sure that any soap is removed with a water rinse. Do not use chemical solvents or abrasives for cleaning.

Anti-glare Coating

In the early Bradford Telesets the face plate of the 19AP4 has been given an anti-glare coating to reduce reflection from the viewing surface of the tube under conditions of high ambient lighting. Observe the same precautions in handling that were described under anti-corona coating. The 19AP4 tubes in the latest Bradfords are not coated with the anti-glare solution.

Ion Trap Adjustment

(This applies to the 12QP4, 12RP4, and 15DP4 as well as the 19AP4)

Make all initial ion trap adjustments at the lowest setting of the brightness control possible. The correct position for the ion trap magnet is shown in figure 1.

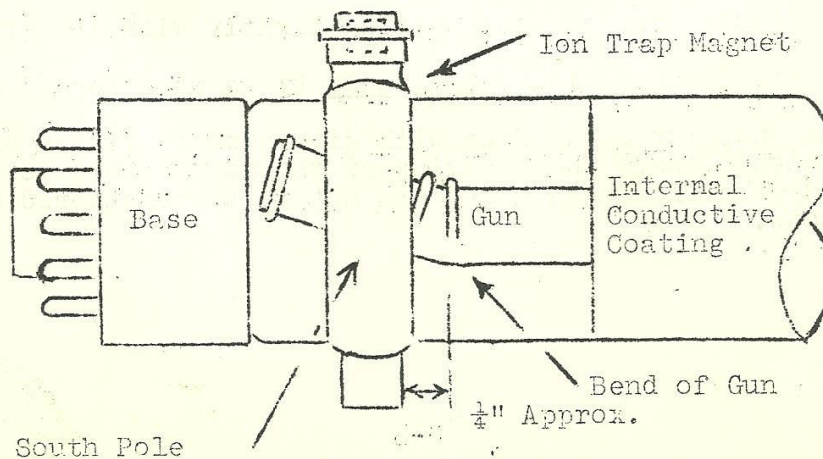


Figure 1

With the base end of the gun pointing up as shown, slide the magnet over the neck. The north pole should be to the left adjacent to pin #12 and the south pole to the right adjacent to pin #6. The magnet should be placed about $\frac{1}{4}$ " in back of the bend in the gun for the first adjustment.

Rotate the ion trap magnet about an eighth of a turn each way and slide it back and forth along the neck stopping at the point of maximum brightness. Keep reducing the brightness as the system is brought into line to avoid damage to the tube. After alignment at low brightness, make a final adjustment with the brightness control set to where the raster just starts to "bloom". At this point the raster begins to expand in size rapidly.

If no raster appears and all other conditions are normal, it is possible that the magnet polarity is reversed. Rotate the magnet through half a turn around the neck. Then make adjustments as before; if there is still no raster, try another magnet before looking for other sources of trouble.

Do not leave the tube on any longer than necessary when making preliminary adjustments. If the beam of electrons is operated at high intensity before being brought into line with the ion trap magnet, it may damage the internal structure of the tube. For the same reason, it is important that the final adjustment of the magnet is made for maximum screen brightness. Failure to do this may result in burning the limiting aperture or the release of gas into the tube.

Focus Coil and Deflection Yoke Adjustment

The focus coil and deflection yoke should be carefully aligned so that the raster covers the screen properly. Do not use the ion trap magnet to get screen coverage. It should be used only to obtain maximum pattern brightness.

IMPORTANT ADDITION TO ABOVE PROCEDURE

Sometimes it will be found possible to get two brightness maximums when moving the ion trap magnet back and forth along the neck. The correct position to use is closer to the base of the tube. The second maximum is usually found when the magnet is close to the case of the focus coil. The magnetic shunting effect of the focus coil case on the ion trap magnet changes the field strength so that a brightness maximum is obtained in this incorrect location. Tubes should not be operated at the second maximum since spot centering is disturbed and there is a possibility of tube damage.

Safety for TV Set Servicemen,
Dealers, Et Cetera

(The following information on the handling of cathode-ray tubes has been prepared by the RMA Cathode Ray Safety Committee.)

Servicemen who install or service television receivers have a great responsibility both to the public and to the industry, as well as a personal interest, in seeing to it that no accident due to carelessness or negligence will occur to arouse fear of this new instrument of home entertainment.

The television receiver, largely because of the presence of the picture tube, contains certain potential hazards that were not in the radio set. But these hazards need not cause anyone apprehension providing a few simple precautionary rules are observed by the serviceman. The picture tube is not dangerous if properly handled.

There are two ways in which injury can occur if a picture tube is carelessly handled either in a service shop or at a set owner's home. One is from the breakage of the picture tube possibly resulting in flying glass, and the other is from high voltage shock. Most trained servicemen know how to guard against shocks, but the breakage of picture tubes can result from carelessness regardless of the serviceman's experience.

Any serviceman can be sure that he will neither injure himself nor cause injury to someone else by following a few simple safety rules. These are:

1. Don't expose picture tube until you are ready to use it.
2. Always wear goggles when handling a naked tube.
3. Keep people away at a safe distance when a picture tube is exposed.
4. Place the used tube in the carton which contained the new tube and take it away.
5. Always keep the picture tube in the protective container whenever possible. Always place an exposed tube on some sort of clean soft padding when necessary to set it down.
6. Don't leave any picture tubes lying around. There are two safe ways of disposing used tubes:--
 - a. Place the old tube in a shipping carton properly sealed and then drive a crowbar or similar instrument through the closed top of the container.
 - b. An alternative method in the disposing of more than one tube, is to use a metal ash can with a plunger operated through the closed top.
7. Don't use regular picture tubes for displaying purposes. Contact your supplier for special display tubes.

DU MONT TELESET FAILURE REPORT

To improve our Telesets and make them as trouble free as possible, it is vital that we receive accurate field reports. To facilitate these reports we have devised a "Teleset Failure Report". It is available to all our dealers and service organizations. We ask that you fill this out and send it to us at least once a month. The purpose of this report is two-fold. First, it enables us to get an idea of how our sets are functioning in various parts of the country. Secondly, it permits us to obtain information that may be condensed into a trouble shooting table and send it to all our dealers and service organizations, thus, permitting more rapid trouble shooting. In many cases the same difficulty is more apt to occur and by referring to such a table it enables the serviceman to eliminate the more probable troubles.

Pertaining to tubes, we are definitely interested if one manufacturer's tube is giving more trouble than that of another in any specific circuit.

This report may also be used to notify us of any Telesets that fail to operate upon receipt. Very little trouble should be experienced with the operation of our Telesets immediately after unpacking. If the set becomes damaged in shipment, that is a matter that will have to be taken up with the carrier and our transportation department. However, if the failure to operate is due to defective components, poor workmanship or any part shaking loose during shipment it is very important that we are informed of this. All reports will be acknowledged. Upon receipt of such reports, if any particular trouble is being investigated the progress of the investigation will be made known in the acknowledgement. Copies of this failure report will be sent to the dealers and service organizations at frequent intervals. Additional copies may be obtained at any time upon request.

STOLEN TELESSETS

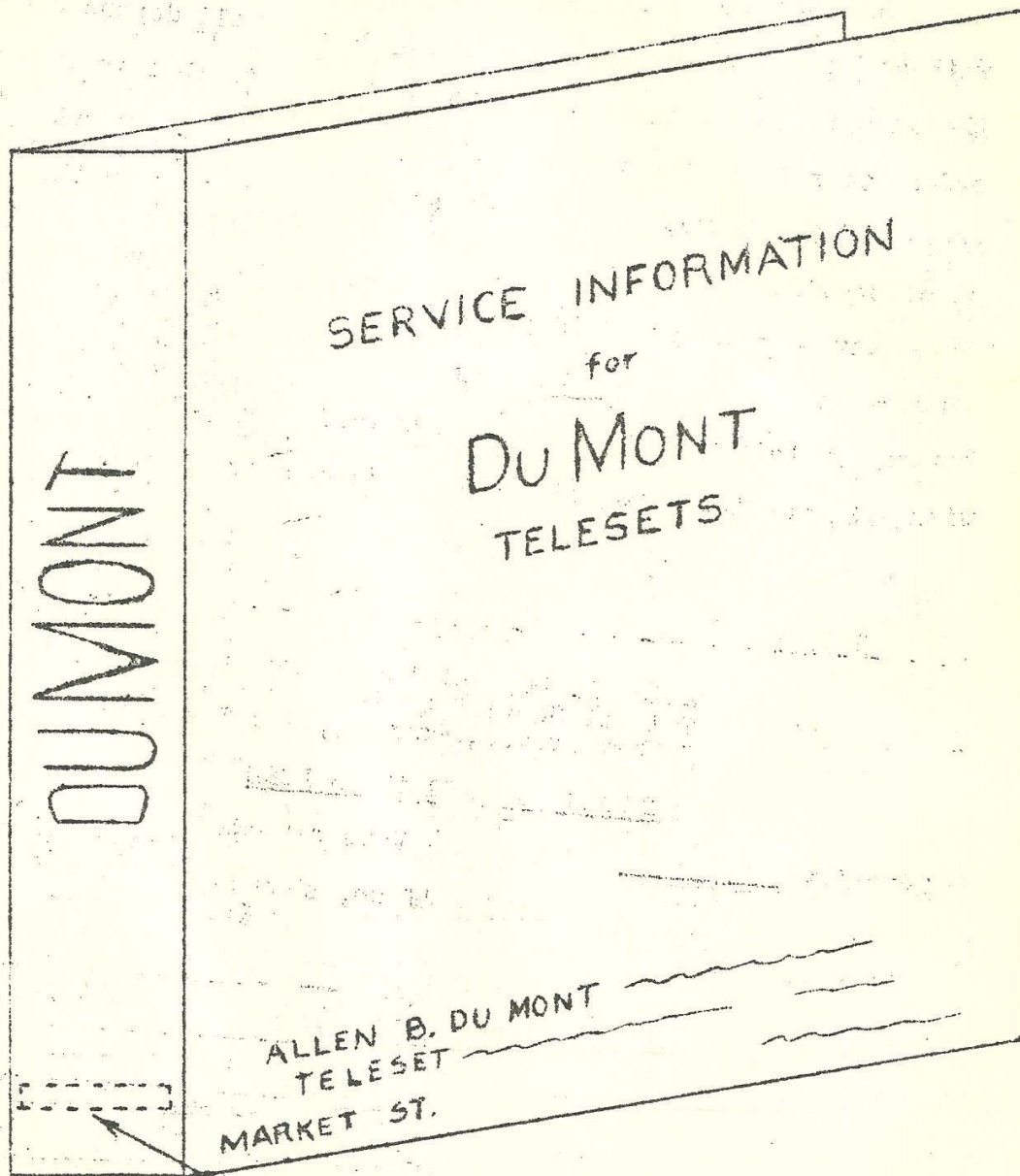
Frequently we receive reports from dealers or distributors or, in some cases from the civil authorities, that certain of our Telesets have been lost or stolen. All dealers and service organizations will be notified of such Telesets in the regular issue of service bulletins. This service is available to our authorized dealers and service organizations.

CHASSIS HOLD DOWN BOLTS

All Du Mont Telesets are so constructed that the chassis are held down by means of chassis hold down bolts. These bolts are used not only to fasten the chassis to the cabinet but also to provide a suitable ground connection between the chassis and the screen mounted underneath the chassis. It is, therefore, important that these bolts be replaced when the chassis are replaced. On a number of occasions, our Field Representatives have found that these bolts were not replaced.

ATTENTION DEALERS AND SERVICE MANAGERS

We are in the process of procuring a hard cover binder suitable to be used for enclosing our Service Manuals and Service Bulletins. The front cover and binder back will be embossed as shown in the sketch below:



Name in gold.

ALLEN B. DU MONT LABORATORIES, INC.
TELESET SERVICE CONTROL DEPARTMENT
2 MAIN AVENUE, PASSAIC, NEW JERSEY

Note that a place has been located where the name of the dealer or service organization may be stamped in gold if so desired.

The use of such a binder provides the advantage of keeping all the Du Mont servicing information in one place. It also presents a much neater appearance to a customer if your serviceman opens such a binder in his presence.

The binder is a hard cover, 3 post affair, reinforced and with an expandable feature. The exact price will depend upon the quantity purchased. We, therefore, hope to receive enough orders to reduce the price to approximately \$4.00. An additional charge of \$0.50 will be made for stamping your name in the space provided.

Anyone interested in procuring one or more of these binders is requested to fill out and send in the form at the bottom of this page. These binders will be supplied complete with all service notes and service manuals available.

Allen B. Du Mont Laboratories, Inc.
Teleset Service Control Department
2 Main Avenue, Passaic, New Jersey

SERVICE BINDER ORDER FORM

Quantity _____ * Name stamped on binder? _____
If so, show exact spelling desired
(Please print)
Name _____
Address _____

CATHODE-RAY TUBE REPLACEMENT

All tubes currently being used in Du Mont Telesets use the bent gun, thus requiring an ion trap magnet.

The older models containing tubes with the straight gun replacements should be made as follows:

A 12JP4 should be replaced with a 12RP4 for it is exactly the same blank. An ion trap magnet must be used with this tube.

15AP4's should be replaced by 15DP4's, also using the ion trap magnet.

20BP4's will be replaced by a 20BP4 if the Teleset from which the tube was taken is still in warranty. However, if the defective tube is not in warranty, 20BP4's will be replaced with the necessary modification kit to permit proper mounting of the 19" metal tube. The modification kit for this change may be obtained from the Spare Parts Section of the Teleset Service Control Department. For the correct method of adjusting the ion trap magnet, see page G-4 of these Service Notes.

REGISTRATION OF TELESETS

Request For Teleset and Teletron Warranty Cards are being received by us damaged and as a result of their condition can not be used in our IBM machines without copies being made. The damage to which we refer is caused by putting staples through cards, clipping cards with paper clips, bending cards, or breaking edges by careless handling. Card damage is normally the result of dealer or service organization handling and not the normal handling received in the mail. The cooperation of all those handling Request for Teleset and Teletron Warranty Cards is requested so that card damage will be reduced.

In the future all Telesets should be registered by forwarding to us a Request for Teleset and Teletron Card. For those Telesets shipped from the factory with the old Teleset and Teletron Warranty, return the old form with the "Request" card by means of the mailing envelope provided with the old form. A new Teleset and Teletron Warranty will be mailed by us to the customer. If the old form has been misplaced indicate same on Request for Teleset and Teletron Warranty Card in the remarks section. The tube number must be filled in on the "Request" card for those Telesets shipped with old forms. For Telesets shipped without old forms, we will supply you with the tube number by means of your copy of the registration notice and, therefore, it is not necessary for you to include same on the "Request" card. Telesets shipped under the new registration system can be identified by reason that a Notice to Customer form has replaced the Teleset and Teletron Warranty in the envelopes containing the operating handbooks.

Request for Return of Parts and Credit Forms should not be sent to us for specific Telesets until you have received from us your copy of the registration notice. A Teleset is not to be considered as registered until you are so notified. Your forwarding the Request for Teleset and Teletron Warranty Card to us does not indicate a Teleset is registered. The "Request" may not be honored if; necessary information is missing, Teleset was previously registered for someone else, or incorrect information is furnished. To avoid the return of Request for Return of Parts and Credit Forms to you marked "No Warranty" wait for your notice of registration.