

CALLS ON PERMANENT SIGNAL HOLDING TRUNKS

1. **General.** Calls requiring answer appear as flashing signals. When answered, a trunk signal becomes steady and remains so until the line is released from the trunk or until the cord is removed from the jack following such release.

Permanent signals which you can identify as resulting from faulty equipment are reported as soon as you arrive at this conclusion. The majority, however, appear to be cases of receiver off hook and are not reported until certain prescribed efforts are made at periodic intervals to clear the condition.

Efforts to clear these signals consist of ringing in different ways to try to reach the station that has the receiver off and, except for certain types of lines, of applying the howler. Having the line traced to determine whether the howler may be used is contemplated when necessary. If the prescribed operations do not produce a response, the signal is reported as a line in trouble. Colored dummy plugs are used to designate the action that has been taken.

Provision is made for obtaining the number whenever you find a customer on the line, and for trying to reach a station to obtain the number in other cases, so that you may include the number of the line causing the signal in your report to the plant forces as well as other significant details of the condition which you observe. Whenever the hang up of a customer clears the signal, no further action is necessary except in certain cases where it seems to be the courteous thing to ring back and inform the customer that his line has been cleared, as in Sec. 1, 8.

2. **Cord to be used in answering.** In general, use a front cord so that you will be ready to ring except in the case of coin trunks where a back cord is necessary for returning the coin. If not otherwise locally directed, you may use the howler or test cord to answer noncoin signals.

3. **Response to your answer.**

a. Proceed in accordance with the customer's statement and if the trunk is a coin trunk, operate the return key as soon as you have given the report to the customer.

- (1) If he is trying to make a call, ask him to make it again, giving him dialing instructions as in Sec. 1, 4 or directing him to the proper operator if necessary.
- (2) If he claims that his coin has been collected or has not been returned, proceed as in Sec. 1, 6d, referring him to his operator if he wishes a call or arranging for a refund as though you were an "A" operator, if that is all he wishes.
- (3) If he indicates that his bell rang, proceed as an "A" operator handling this condition in Div. A, Sec. 25, 21.
- (4) If he says that he was cut off, refer him to the operator, as for example, "I'm sorry. If you will dial the operator she'll be glad to help you."
- (5) If he asks you to complete a call for him, explain that you can not do so, as in Sec. 1, 6b.
- (6) If a P.B.X. attendant says she is receiving a steady signal, obtain the number of the particular line involved, or if locally directed to do so obtain the listed number, for use if it becomes necessary to report the trouble.
- (7) If a repairman requests connection to the test desk, substitute a test cord for the one used in answering.

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3. Continued

- (8) If a repairman requests the number of the line, proceed as follows unless you have been locally directed merely to connect him to the test desk with a test cord.
- (a) Operate the holding key, replace the cord with a plug to designate tracing, and report the line for tracing.
 - (b) When you obtain the line number, plug into the trunk jack with an idle cord and give the number to the repairman. If he makes any further request, proceed in accordance with it.
 - (c) When the repairman has disconnected and you remove the cord from the jack, if the trunk signal remains lighted, report the trouble.

- b. When the calling party hangs up, disconnect. If the trunk signal remains lighted, replug and supervise the connection for a few seconds so that if the customer returns you can explain that there is trouble on the line and that you will report it. Report the trouble if the signal remains lighted when you again disconnect.

4. Conversation heard when you answer. Operate the holding key and at the first opportunity, try to obtain both telephone numbers, saying for example, **"This is the operator. There's some trouble on this connection. May I have your numbers, please?"**

- a. If you obtain the numbers and it is evident that they are extensions or stations on the same line, restore the holding key, leave the cord in the trunk jack, and notify your supervisor.
SUPERVISOR: As soon as conversation ends, reach the station or stations involved and explain that calls for an extension or another station on a line should be made by dialing the operator and asking her to establish the connection. Suggest that this procedure be observed on subsequent calls, if necessary explaining that the necessity of talking through dial tone can be avoided thereby. Refer the case to your chief operator for such other action as seems warranted.

- b. In all other cases, say **"I'll report the trouble,"** leave the holding key operated, and report the trouble.

5. No response to your answer. Proceed through the following steps in so far as they apply to the trunk involved and your equipment permits (1) until the signal clears or (2) until the indications call for reporting the trouble.

a. Test the line.

(1) Make the following tests.

- (a) On coin trunks operate the collect key and then disconnect. Trouble may be assumed if the trunk signal remains lighted and the cord supervisory signal lights when you replug.
- (b) On noncoin trunks, if the supervisory signal is lighted, disconnect. Trouble may be assumed if the trunk signal remains lighted.
- (c) On noncoin trunks, if the supervisory signal is out, operate the reverse key if provided, using the test or voltmeter cord in the trunk jack. Trouble may be assumed if the supervisory signal lights.

(2) If there is no indication of trouble, try to clear the signal as in "b."

- (3) If there is indication of trouble in "(1)" ring on the line several times as though you were an "A" operator and if you receive a response try to obtain the number of the line or a station on it, using such a phrase as, **"This is the operator. There's some trouble on this line. May I have your number, please?"** and indicate that you will report it. When the customer hangs up, disconnect and if the trunk signal remains lighted, report the trouble. If you do not receive an answer in about a minute, report the trouble.

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5. Continued

- b. Try to clear the line. If no indication of trouble appears assume that a receiver is off the hook.
- (1) Ring back on the line, using as many of the methods in "7" as apply in your office.
 - (a) If you receive a response, obtain the station number, explaining the situation, as for example, **"This is the operator. I'm trying to locate a receiver that's off the hook on your line. May I have your number, please?"** When you obtain the number, make a note of it and indicate that you will report the condition. If the customer's hang up does not clear the condition, continue ringing on the line for about another minute.
 - (b) If you do not receive a response after about two minutes of ringing, discontinue ringing and take the next step.
 - (2) If you can be sure that the line is not a P.B.X. line, when the ringing proves ineffective apply the howler as in "8."
 - (3) If both ringing and the howler, when it can be used at this time, are ineffective, disconnect from the trunk, designate it as having received initial action as in "13," and leave it until the next periodic check of trunk signals.

6. **Periodic check of trunk signals.** On the hour and half hour, or at other intervals locally specified, observe each permanent signal holding trunk signal that has already been answered and take action as provided below.

- a. Trunk Signal not Lighted but Designating Shield or Plug in Trunk Jack. Remove the shield or plug.
- b. Trunk Signal Lighted. Proceed on the basis of the action already taken as follows. If at any time you receive a response, obtain the station number and explain the situation as in "5b(1)(a)."
 - (1) Designation Indicates Initial Action Taken. Challenge and if you receive no response, repeat the efforts to clear the line as in "5b" except that, if locally directed to do so, omit the howler applications. If the efforts are unsuccessful designate the trunk as having received supplementary action.
 - (2) Designation Indicates Supplementary Action Taken. Challenge and if you receive no response, repeat the efforts to clear the line as in "5b" except that, if locally directed to do so, omit the howler applications. If the efforts are unsuccessful, proceed as follows.
 - (a) Trunk Serves P.B.X. Lines. Report the trunk for tracing and designate it as being traced.
 - (b) Trunk does not Serve P.B.X. Lines. Report the trouble and designate the trunk accordingly.
 - (3) Designation Indicates Trunk Reported for Tracing. Take no action until you receive a report from the switchroom.
 - (4) Designation Indicates Trunk Reported for Trouble. Take no action until the signal goes out or the plant forces make a specific request.

7. **Ringling on a subscriber line.** Ringling to clear a receiver off hook condition may be effective in different ways depending on the method used and the equipment on the particular line. Use all of the following methods that apply and for which you have equipment and use them in the order locally prescribed or which you have found to be most effective. Any one of these methods may be repeated three or four times if no response is received before the next is used, as when you find one method particularly effective, or you may use each method once in rapid succession and then repeat the series three or four times before leaving the signal for the time being. Always challenge before ringling on a line and listen for a response to avoid ringling in a customer's ear.

- a. Direct Method. Using the front cord of a regular cord pair or the test or voltmeter cord, operate and restore the ringling key about once a second, three or four times, then supervise for an answer.

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7. Continued

- b. **Reversal Method.** Using the voltmeter or test cord, operate and restore the reverse key about once a second, three or four times, with the ringing key operated throughout the sequence. Then restore both keys and supervise for an answer. This method has particular application to individual lines.
- c. **Remove Ground Method.** Using the test or voltmeter cord and with the remove ground key operated, ring manually either alternating one-ring and two-ring codes if necessary for semiselective ringing or alternating the two keys for one side of the line for four party full selective ringing. Give three or four rings, then restore the keys and supervise for an answer. This method is effective only where grounded ringers are used and is generally confined to trunks designated as serving party lines, unless you have been locally directed, or know from experience, that it is effective on other trunks also.

8. Applying the howler. If the howler busy signal is not lighted, plug the howler cord into the trunk jack, cut in, challenge with **"Operator"** at least twice, and wait for a response. Never apply the howler without first making this challenge. Be particularly careful not to apply the howler to a line which may be one of an associated line group and also be guided by any local limitations on the use of the howler.

- a. **No Response to Your Challenge.** Observe the busy lamp and if it is lighted, disconnect and wait until the howler is free. If the busy lamp is not lighted, operate the howler key and observe the howler supervisory signal.

- (1) While the supervisory signal flashes, the howler tone is being applied to the line.
- (2) If the supervisory signal lights steadily, immediately disconnect the howler cord and take no further action.
- (3) When the supervisory signal goes out, restore the howler key, challenge again, and if no reply is received, apply the howler again. If, however, you are locally directed to use the howler only on the initial action, continue to apply the howler at five minute intervals if necessary for about fifteen minutes. If the line still does not become clear, disconnect the howler cord.

- b. **Response to Your Challenge.** Proceed as for a response to ringing on the line in "5b(1)(a)" except to repeat the use of the howler instead of ringing if the line does not become clear on the customer's hang up.

9. Supervision of trunk signals. Supervise each trunk in which there is a designating plug or shield.

- a. If the trunk lamp goes out at any time, remove the designation.
- b. If the trunk lamp flashes as on a new call, remove the designation and answer.
- c. If the trunk lamp flashes rapidly on a trunk on which the holding key is operated, do not release the trunk until directed to do so by the plant forces.

10. Holding key operation. Whenever you operate the holding key on a trunk, do so before disconnecting from the trunk jack. Keep a dummy plug to designate tracing in the answering jack of the trunk until you release it. Do not restore the key until requested to do so by the plant forces.

If the line is still being held at the end of ten minutes, plug into the permanent signal trunk jack and challenge. If you receive a response, proceed in accordance with it but consult the test desk or a plant man before restoring the holding key. If you do not receive a response, notify the test desk and proceed as directed.

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- 11. Reporting for trouble or tracing.** When you report a line as in trouble, designate the trunk as having been reported for trouble. If, however, you are requesting only that the line be traced, designate the trunk accordingly.
- a. If you know the number, include it and state whether it is a P.B.X. or a coin line if you know, as for example, "Permanent signal 94, frame 104, (P.B.X.) Adams 1234."
 - b. If the trouble is a case of conversation heard and you know both numbers, report to the switchroom, as for example, "Permanent signal 94, frame 104, Adams 1234, Beacon 5678."
 - c. If you do not know the number, merely report the trunk number and the indication, as for example, "Permanent signal 94, frame 104, coin line," "Permanent signal 94, frame 104, steady signal," or "Permanent signal 94, frame 104, trace."
- 12. Procedure after having had a connection traced.** When the switchroom reports the identity of a line, acknowledge the report and proceed as follows, first obtaining the number and class of service from the source locally specified if they are not given by the switchroom.
- a. Line Traced has not yet Cleared.
 - (1) If the line is one of an associated line group, try to reach the attendant over another trunk and ask her to clear the trunk concerned. If you succeed in clearing the trunk, remove the designation; if not, report the trouble.
 - (2) If the line is not one of an associated line group and you know that it is not a coin line, proceed as follows.
 - (a) Howler Cord Provided. Apply the howler as in "8," repeating the application at about five minute intervals for fifteen minutes. If the line still does not clear, report the trouble.
 - (b) Howler Cord not Provided. Report the trouble.
 - (3) If the line is a coin line, report the trouble unless you know that the switchroom will report it.
 - b. Line Traced has Cleared. Disregard the report. Remove the tracing designation in the trunk unless you are sure the designation has been replaced for a new call. In removing it, observe the trunk signal for a possible new call. If, however, some designation other than tracing is in the trunk jack, disregard the report and proceed as indicated by the designation.
- 13. Designations to show the status of signals.** If no local directions are provided, the following designations are suggested to aid you in remembering the status of steady signals.
- a. Initial Action Taken. No shield or plug in jack. A green dummy plug with shield may be used if locally provided.
 - b. Supplementary Action Taken. Red dummy plug with shield.
 - c. Reported for Trouble. White dummy plug with shield.
 - d. Reported for Tracing. Any other available distinctive dummy plug of a color and type which has been provided locally for this purpose.
- 14. Abnormal number of permanent signals.** If you notice an abnormal number of signals within a few minutes or if the overflow pilot signal lights, report the condition, giving such details as you have and notify your supervisor.
- SUPERVISOR:** Advise your chief operator of the condition and if necessary omit the application of the howler before reporting lines in trouble.

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15. Night, Sundays, and holidays. During the hours locally specified, in the absence of local directions to the contrary, be guided by the following.

- a. Do not ring on a line or apply the howler unless warranted by an emergency call or unless you know the line is in a location where it is reasonable to expect an answer without undue inconvenience to the party concerned, but supervise it closely. Report exceptional cases in accordance with local directions.
- b. About thirty minutes before the end of the night period, designate all trunk signals that are lighted and have not given indication of trouble as having received initial action. When the night period ends, resume normal operation as regards trying to clear the lines.
- c. When the plant forces involved are not available to receive reports of trouble, keep a memorandum of signals indicating trouble and of signals requiring tracing. When the plant forces involved come on duty, report all such signals that are still lighted.

In offices which serve a high percentage of business lines, however, be guided by local directions in regard to deferring the reporting of those signals which you received near the close of the customary business day until shortly after the opening of the business day and in regard to repeating your effort to clear them as in "5b" before reporting them.