

**INSTRUCTIONS FOR INSTALLING
TONE CABINET CONTROL KIT
for
HAMMOND SPINET ORGAN (M Series)
and
HAMMOND CHORD ORGAN (S Series)**

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INSTRUCTIONS FOR INSTALLING TONE CABINET CONTROL KIT

For Spinet Organ (M Series)
and Chord Organ (S Series)

This kit is used to connect a Hammond tone cabinet to any one of the above consoles. The tone cabinet power supply will turn on and off with the console. The signal circuits to the console speaker and the auxiliary tone cabinet can be controlled by a 3-position switch and two volume controls.

WARNING

Power switch in console is designed to handle 350 watts. The combined wattage of the console and any tone cabinets connected directly to it must not exceed this amount.

Generally one 20 watt cabinet can be connected, and on some consoles two 20 watt or one 40 watt cabinet, without overloading the power switch.

If the combined wattage of the console and tone cabinets exceeds 350 watts, the A.C. power to the tone cabinets must be supplied through an external switch or relay as described in the Hammond Organ Service Manual covering the larger instruments.

The ratings below are offered as a guide; be sure to refer to console and cabinet name plates for exact ratings.

<u>UNIT</u>	<u>APPROXIMATE WATTAGE OF UNIT</u>
Spinet Organs	93 to 125 (depending on model)
Chord Organ Model S	193
Chord Organ (other models)	150
JR-20 Tone Cabinet	103
HR-40 Tone Cabinet	180 to 248 (depending on model)

1. CONTROL BOX WIRING.

If console has one 12" speaker, control box is wired correctly as shipped. If console has two 10" speakers, open control box, detach green transformer lead from solder terminal, and connect transformer black wire there instead. Tape end of green wire to keep it from touching anything.

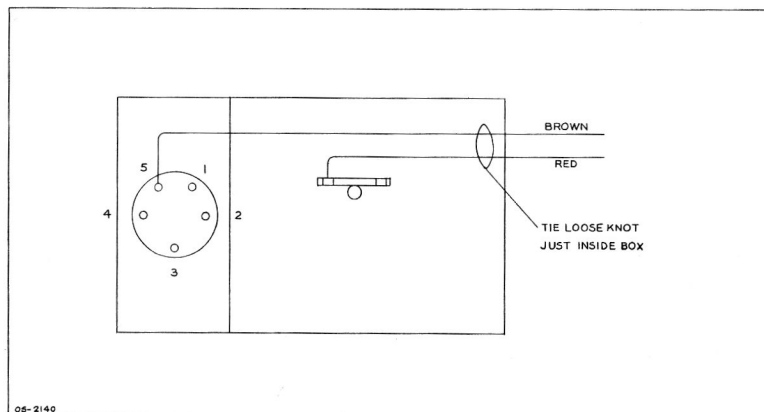
2. MOUNT CONTROL BOX.

Install control box under wooden front rail of console at right side, with front edge of cover against back of rail. Push box to the right as far as it will go. Cover extends past right end of box in order to give additional support. Spot 2 holes in rail, drill 5/8" deep with 3/32" drill, and mount with 2 wood screws furnished.

Although right end is preferred location, box may be mounted at left if necessary. In this case, remove cover and turn it over so that it extends past left end of box.

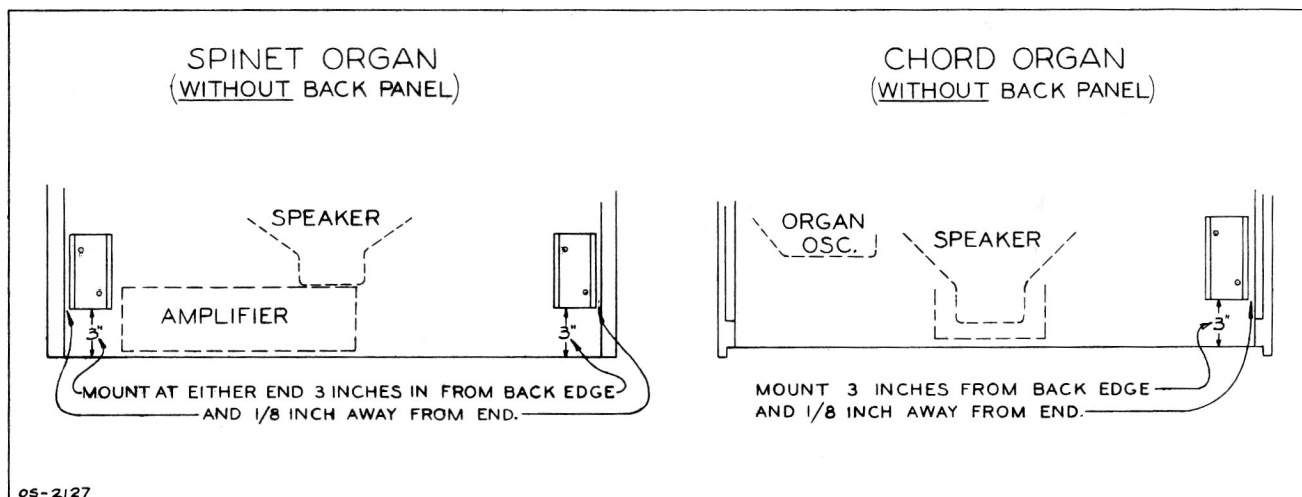
3. ATTACH WIRES TO CONNECTOR BOX.

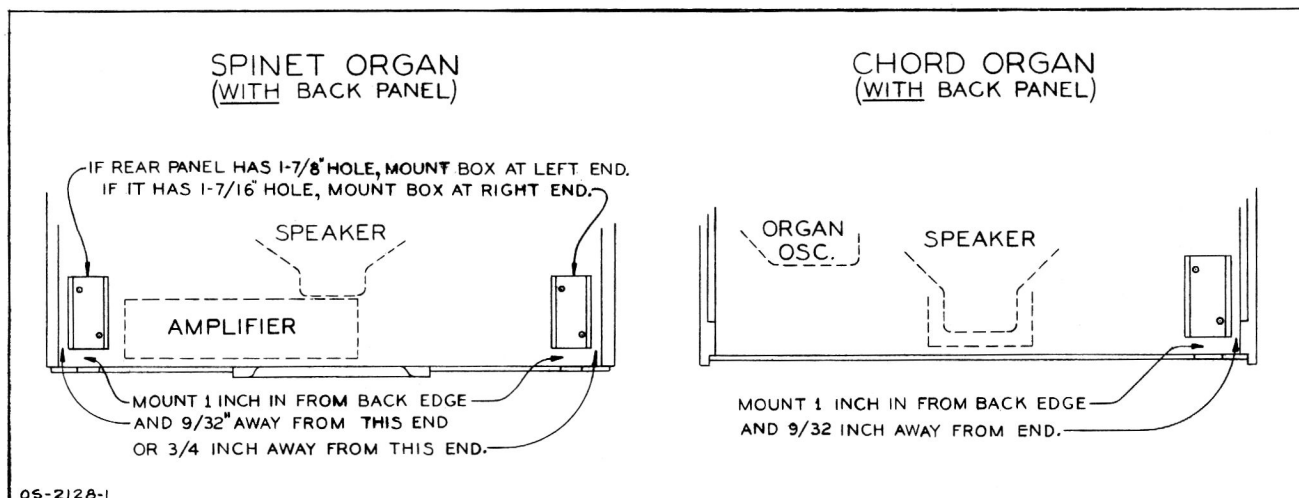
Run wires through gap under keyboard. Put red and brown through holes in connector box. Tie loose knot for strain relief. Cut wires to suitable length and solder them as follows.



4. MOUNT CONNECTOR BOX:

Below are the recommended locations in the back, on the bottom shelf of the console. Place mounting base in desired position, spot two mounting holes, drill $5/8$ " deep with $3/32$ " drill and mount with 2 wood screws furnished.





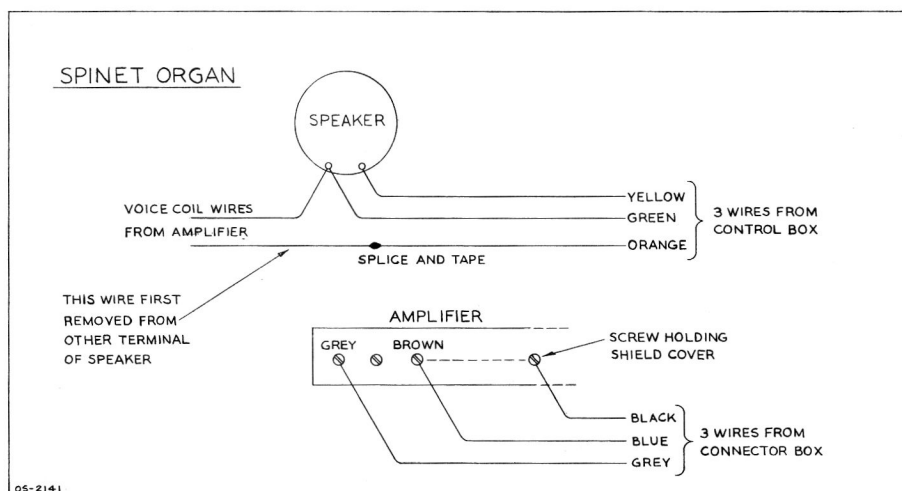
If connector box is to be located over existing wires, use two spacers (furnished) between wood and box to allow wires to pass beneath.

5. ASSEMBLE CONNECTOR BOX.

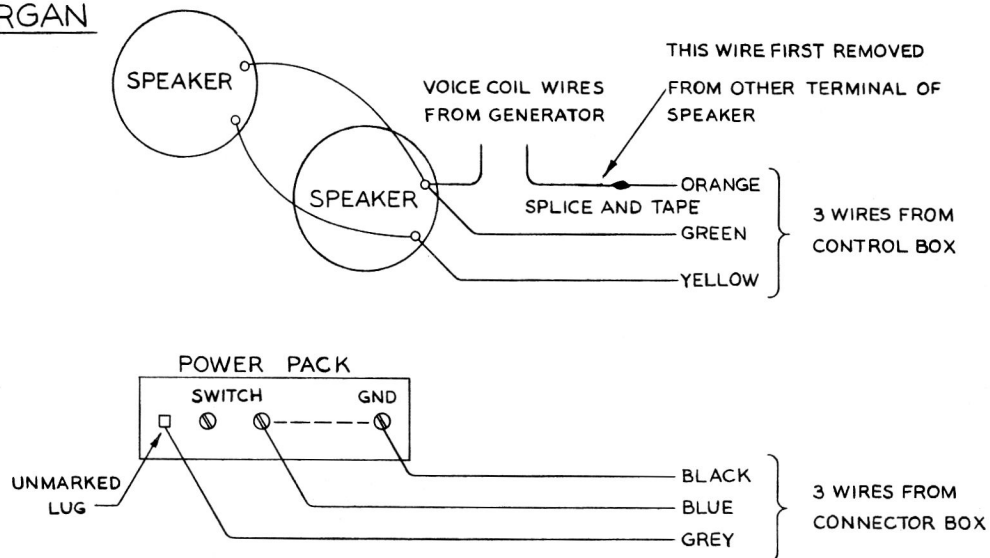
Use four screws (furnished).

6. CONNECT WIRES FROM KIT TO CONSOLE.

- Disconnect one signal wire at speaker (except for this, no original console wiring is to be changed).
- Cut wires to suitable lengths and connect as shown. Where wires connect to screw terminals, attach spade lugs (furnished).
- Grey and blue wires will fit most easily if they are put through two separate grommets where they enter the amplifier or power pack.



CHORD ORGAN



05-2142

7. LOCATE AND CUT CABLE HOLE OR NOTCH IN BACK PANEL:

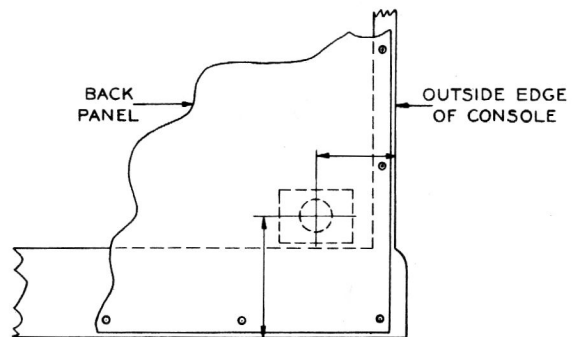
If back panel has a 1-7/16" hole at left, or no hole, drill or saw a 1-7/8" hole at right end as shown below, in line with receptacle in connector box so that cable may be connected without removing back panel. To locate this hole accurately, use the following method:-

WITH BACK PANEL REMOVED, MEASURE FROM CENTER OF PLUG TO OUTSIDE EDGE AND TO UNDER SIDE OF CONSOLE AND MAKE NOTATION:-

HORIZONTAL DISTANCE _____ INCHES

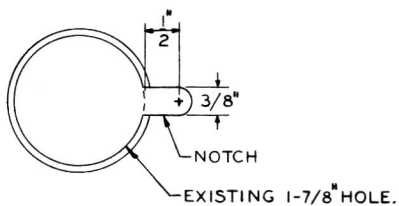
VERTICAL DISTANCE _____ INCHES

REPLACE BACK PANEL AND FASTEN WITH AT LEAST FOUR SCREWS. MEASURE THE SAME DISTANCES FROM THE SAME EDGES TO FIND THE CENTER OF HOLE TO BE MADE IN PANEL.



05-2131-1

If console back panel has factory-made 1-7/8" hole for cable plug, cut a notch as shown below to accommodate the power cord when the cable plug is inserted:-



MEASURE 1/2" TO RIGHT OF EDGE OF LARGE HOLE AND DRILL A 3/8" HOLE. THEN SAW BETWEEN THE HOLES TO FORM NOTCH AS SHOWN.

05-2138

8. MOUNT RESISTORS TO ATTENUATE BASS.

Connect series and shunt resistors (furnished) on tone cabinet output terminals as shown below. This will reduce bass radiation which would otherwise be excessive.

Series resistor (flexible) is connected in series with bass speakers by putting it in place of red wire which goes from amplifier to first bass speaker. Shunt resistor (tubular) is connected across output of bass channel by putting it under screws marked "GND" and "BASS". This will become hot when organ is played loudly, so be careful that it does not touch wires. Discard resistors not used.

<u>Tone cabinet being used</u>	<u>Console being used</u>	<u>Use series resistor</u>	<u>Use shunt resistor</u>
JR-20	Spinet organ	none	none
JR-20	Chord organ	2 ohms	2 ohms
HR-40	Spinet or Chord	1 ohm	2 ohms

9. ADJUST SWITCH.

Set bass correction switch to correspond to room size as directed on tone cabinet instruction card.

10. CONNECT TONE CABINET TO CONSOLE.

The Hammond tone cabinet is connected to console by plugging 5-pole male plug of extension cable into the connector box and 6-pole female receptacle into tone cabinet plug. (The cable is not part of this kit.)

CHECK LIST OF PARTS SHIPPED WITH KIT

- Control box with wires
- Connector box with wires
- 4 mounting screws (2 for control box, 2 for connector box)
- 2 spacers for connector box
- 3 spade lugs
- 1 ohm (10 watt) flexible resistor
- 2 ohm (10 watt) flexible resistor
- 2 ohm (10 watt) tubular resistor

SCHEMATIC DIAGRAM OF KIT

SWITCH IN CENTER AS SHOWN -
BOTH CONSOLE AND AUXILIARY

CONSOLE ONLY
AUXILIARY ONLY
OR

SIGNAL FROM CONSOLE AMPLIFIER

15
15 (10W)
150
L-PAD VOLUME CONTROL

CONSOLE SPEAKER

Y

BL

COUPLING TRANSFORMER AO-22593

820
200MH
3
180
180
1000 Ω AUXILIARY VOL. CONTROL

GY
BN
BK
GN

CONSOLE GROUND - BK

AC - GY
AC - BL

PIN NUMBERS OF RECEPTACLE FOR AUXILIARY CABINET CABLE

01 (G)
03 (GND)
05 (G)
02 (AC)
04 (AC)

FOR CONSOLE WITH TWO 10" SPKRS. ONE 12" SPEAKER

AO-22651-0