

# **INSTRUCTION MANUAL SP-101PB**

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**YAESU MUSEN CO., LTD.**

TOKYO, JAPAN

## **GENERAL**

The YAESU Landliner Phone Patch/Speaker Model SP-101PB is designed to be used with YAESU FT-101B Transistorized Single Sideband Transceiver and provides facilities for phone patch operation as well as an external speaker unit.

All the operating controls are conveniently located on the front panel of the matching compact speaker housing. Jacks are provided on the rear for the necessary external connections.

## **INSTALLATION**

Installation of this unit consists of connecting the telephone line to the Jack marked "LINE" and other connectors to the FT-101B Transceiver.

## **OPERATION**

### **A. Controls and Indication**

#### **Front Panel**

##### **(1) PATCH Switch**

In the "ON" position, the hybrid circuit is connected to the phone lines and transceiver is ready for phone patch operation. The built-in speaker is disconnected. When this

switch is placed in the "OFF" position, the phone-patch is disconnected from the phone lines, and the built-in speaker is connected to the transceiver.

(2) **METER**

This meter shows the signal level fed to the phone lines from the transceiver while receiving a signal. This meter is also used to indicate the balance for the hybrid circuit by a switch on the rear chassis apron.

(3) **TX GAIN Control**

This potentiometer controls the amplitude of the phone signal fed to the microphone input of the transceiver.

(4) **RX GAIN Control**

This potentiometer controls the amplitude of the received signal fed to the phone lines.

**Chassis Rear Apron**

(5) **RECEIVER 4 Ohm Jack**

This Jack is connected to the receiver output when the output impedance of the receiver is 4 ohms.

(6) RECEIVER 600 Ohm Jack

This Jack is used when the receiver output impedance is 600 ohms.

(7) MONITOR/NULL Switch

This switch is placed in the NULL position while adjusting the balance of the hybrid circuit.

It must be in the MONITOR position for phone patching operation and the meter indicates the signal level fed to the phone lines.

(8) BALANCE Control

This control is used to null the receiver audio output to isolate the receiver audio from the microphone input.

(9) LINE Jack

This Jack is used to connect to the telephone lines.

(10) TRANSMITTER 600 Ohm Jack

This Jack is used to connect the patch output to the microphone input circuit when the input impedance is 600 ohm.

## (11) TRANSMITTER Hi-Z

This Jack is used to connect the patch output to the microphone input when the input impedance is high.

### B. Manual Phone Patch Operation

Place the PATCH switch in the PATCH position.

Using the local telephone, contact the user of the phone patch, and have him stand by.

While receiving a signal, set the volume control on the transceiver at 12 o'clock position and adjust RX GAIN control for a comfortable level as heard in the local telephone.

Place the MONITOR/NULL switch in the NULL position and adjust the BALANCE control for a minimum signal level as indicated by the meter. The RX GAIN control should be set to approx. 3/4 rotation for adjustment.

The switch must be returned to the MONITOR position.

Have the user at the remote telephone speak in normally. Adjust the TX GAIN control so that the volume of the

signal will provide the correct output level in the transceiver when its MIC GAIN control sets to 12 o'clock position.

During operation of the phone patch in this mode, it is necessary for the local operator to monitor the conversation, and manually switch the transceiver from receive to transmit by means of the MOX/PTT/VOX switch on the front panel of the transceiver. Monitoring of the conversation can be done with the local telephone.

### C. Voice Controlled Operation (VOX)

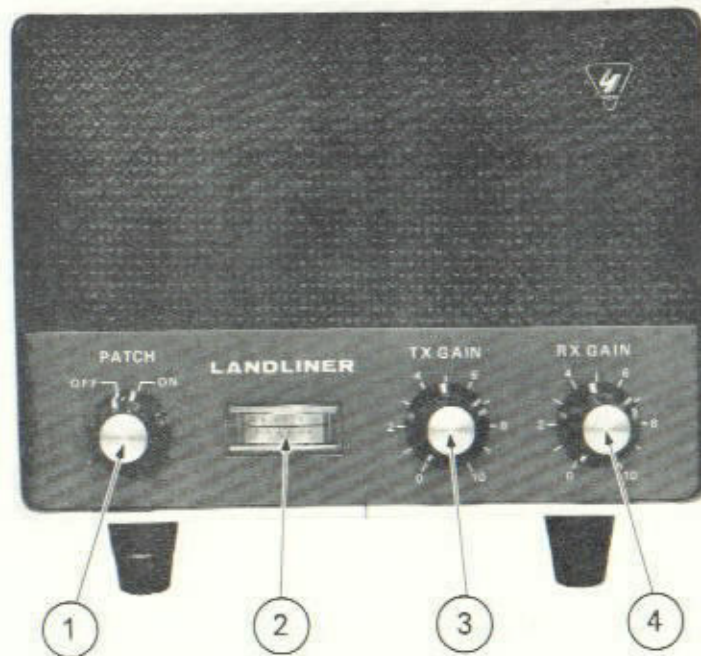
If the telephone line signal is good, VOX operation can be used with the transceiver operation switch VOX position. Proper operation of the VOX will depend on if a good null of the receiver signal is obtained with the HYBRID BALANCE control as described previously.

The quality of this null depends on the quality of the telephone lines, and is best when the line impedance is 600 ohms.

If a good null is obtained, adjust the VOX GAIN control of the transceiver while the user at the remote telephone

is speaking until the transceiver goes into the transmit condition.

The transceiver should revert to the receive condition when the user stops speaking.



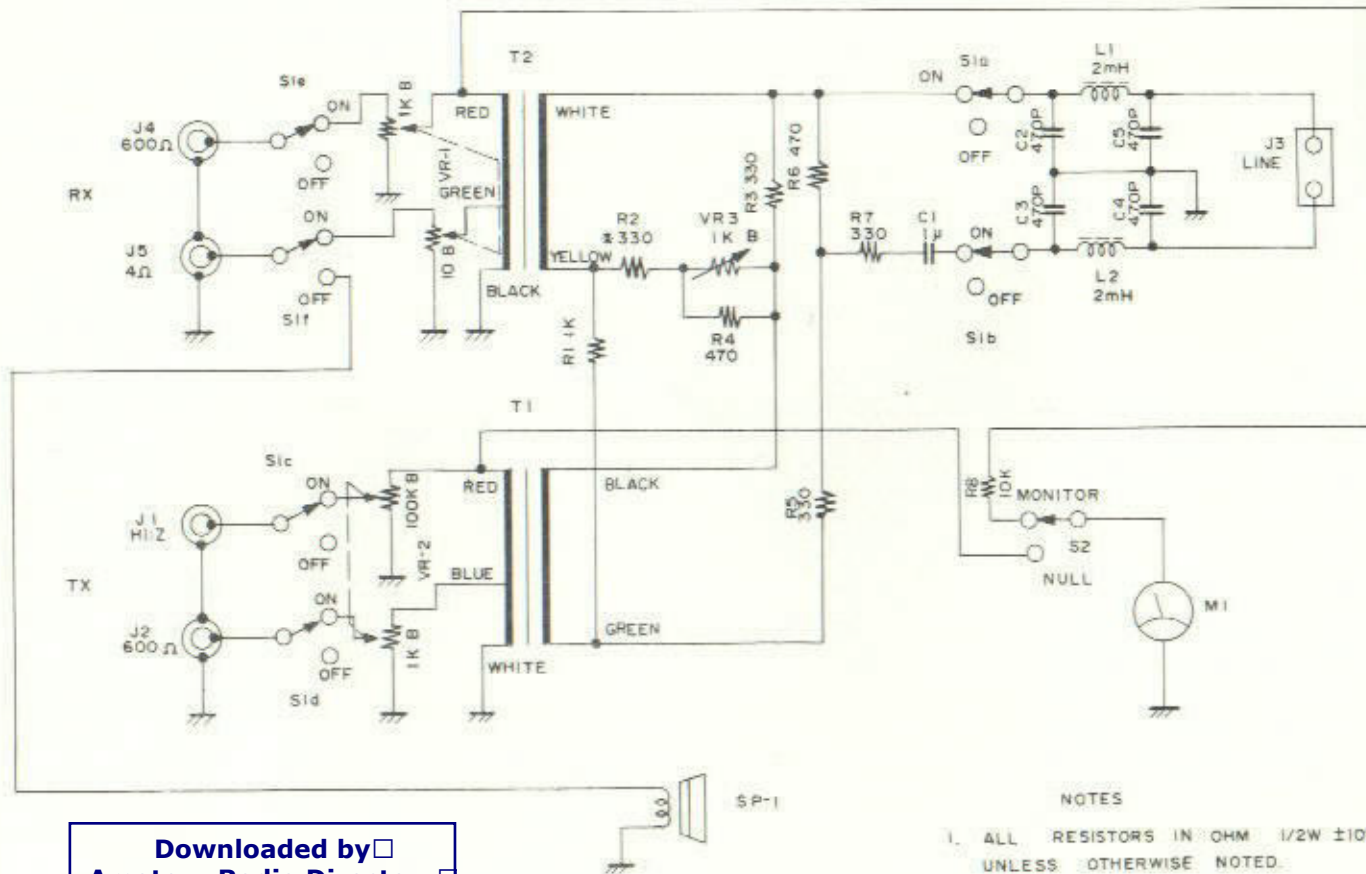
FRONT VIEW



FRONT VIEW

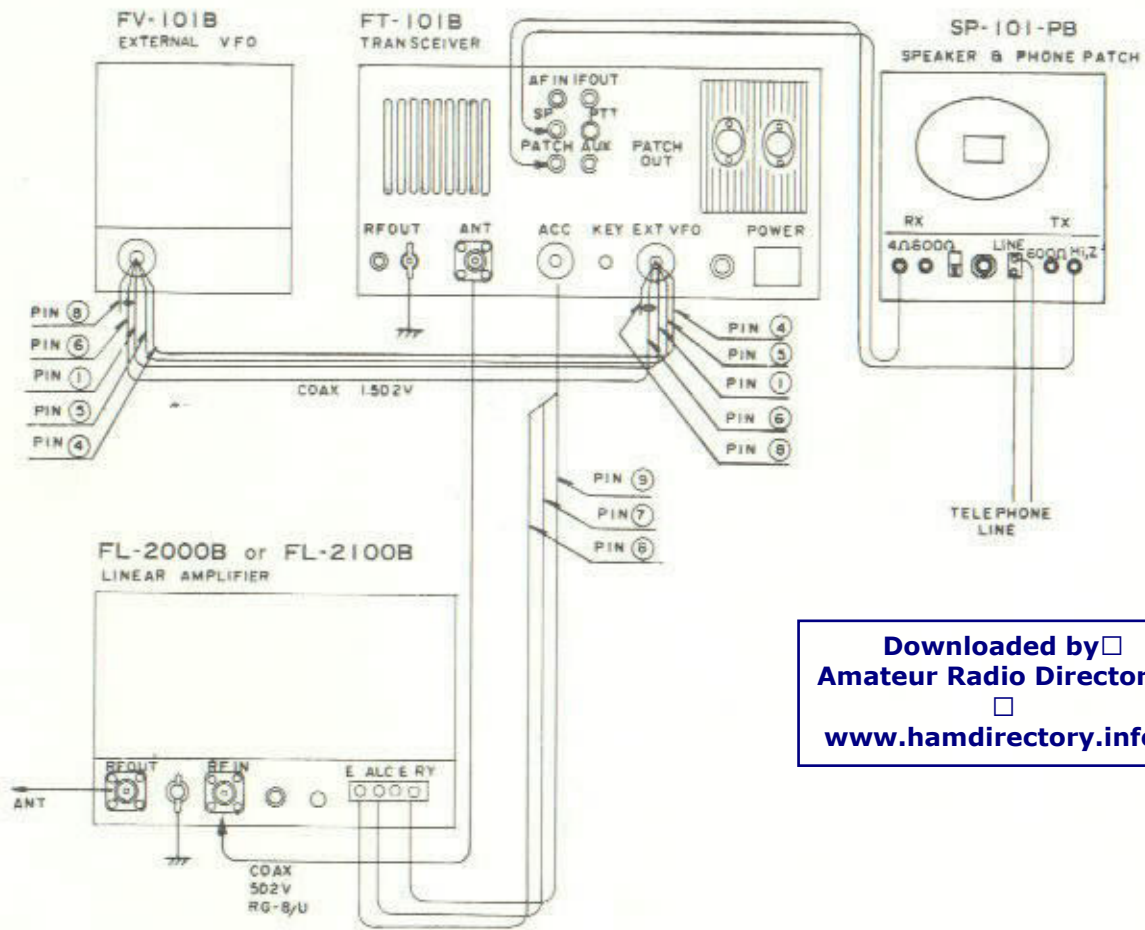
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- NOTES
1. ALL RESISTORS IN OHM 1/2W ±10% UNLESS OTHERWISE NOTED.
  2. ALL CAPACITORS IN P.F.



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