INSTRUCTION MANUAL

LL 301

YAESU MUSEN CO., LTD.

TOKYO JAPAN

CAUTION

- 1. THE MODEL LL-301 CANNOT BE USED WITH FT-301 TRANSCEIVER BEARING THE SERIAL NUMBER OF 301001 THROUGH 302999.
- 2. THE MONITORING BY THE HEADPHONE WILL DISCONNECT THE SPEAKER OUTPUT FROM PIN 1 OF ACCESSORY SOCKET FOR FT-301 BEARING SERIAL NUMBER OF 303001 THROUGH 3139999.

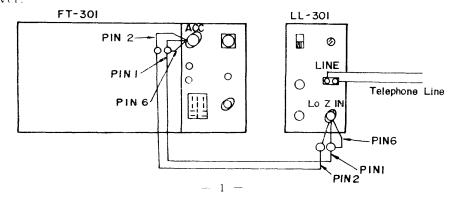
GENERAL

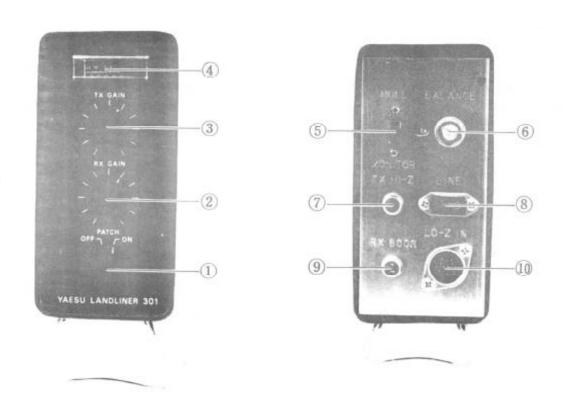
The YAESU Landliner Phone Patch Model LL-301 is designed to be used with YAESU FT-301 Series Transistorized Single Sideband Transceiver and provides facilities for phone patch operation.

INSTALLATION

Installation of this unit consists of connecting the telephone line to the Jack marked "LINE" and other connectors to the FT-301 Series Transceiver.

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





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. When this switch is placed in the "OFF" position, the phone patch—is disconnected from the phone lines.

(2) RX GAIN Control

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

(3) TX GAIN Control

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

(4) 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.

(5) 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.

(6) BALANCE Control

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

(7) TRANSMITTER Hi-Z

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

(8) LINE Jack

This Jack is used to connect to the telephone lines.

(9) RECEIVER 600 Ohm Jack

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

(10) LOW - Z IN Jack

Through LOW-Z IN jack, the connection for the speaker output and the microphone input of FT-301 transceiver are completed.

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.

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

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.

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)

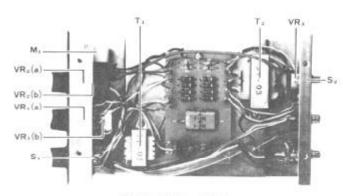
If the telephone line signal is good, VOX operation can be used with the transceiver operation switch VOX position. Proper operation of the VOX will depend on if a good null of the receiver signal is obtained with the HYBRID BALANCE control as described previously.

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.



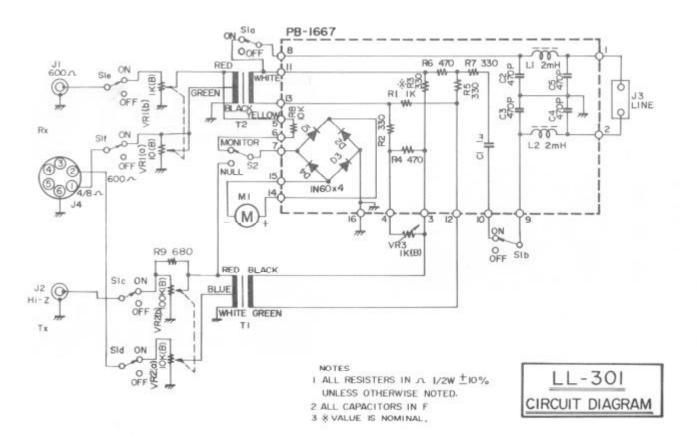
Right Side View



Top View

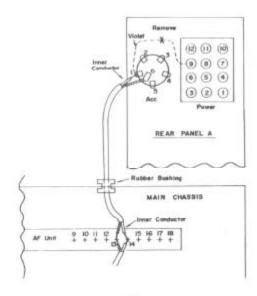


Bottom View



THE MODIFICATION FOR HEADPHONE MONITORING OF FT-301 BEARING SERIAL NUMBER 03001 THROUGH 08999.

- Remove the wiring (violet) between pin 1 of the accessory socket and pin 9 of the power connector.
- Connect pin 14 of AF unit to pin 1 of the accessary socket with a shield wire as illustrated.



LL-301 PARTS LIST

PB	PRINTED CIRCUIT BOARD	T	TRANSFORMER
1667		1	Input SA2-10936 # 510002
		2	Output SA2-10937 #510003
D	DIODE		
1-4	Ge 1N60	M	METER
		1	KTC-012(VU)
R	RESISTOR		
	CARBON	S	SWITCH
2,3,5,7	3∕2 W 330Ω	1	MS-6-2
4,6	∘ 470Ω	2	SS-22-08B
1	* 1Kf	1	
8	* 10KΩ	J	RECEPTACLE
9	¼ W 680Ω	1,2	CN-7017J
VR	POTENTIOMETER	3	SI-7501
1	EVWF OAS 20010 10ΩB/1KΩB	4	CS-260
2 3	EVK-C1S15B $10K\Omega B/100K\Omega B$		
3	EVC-BOAS 15B13 1KΩF		ACCESSORIES
		1,	PLUG
C	CAPACITOR	1,2	CN7017
	DIPPED MICA(CERAMIC)	3	S1-7502
2 5	50W V 4701°F	4	CP-085
	METALIZED POLYESTER FILM		
1	250W V 1/4F		
L	INDUCTOR		
1,2	RF CHOKE 2mH		

