

**INSTRUCTION**

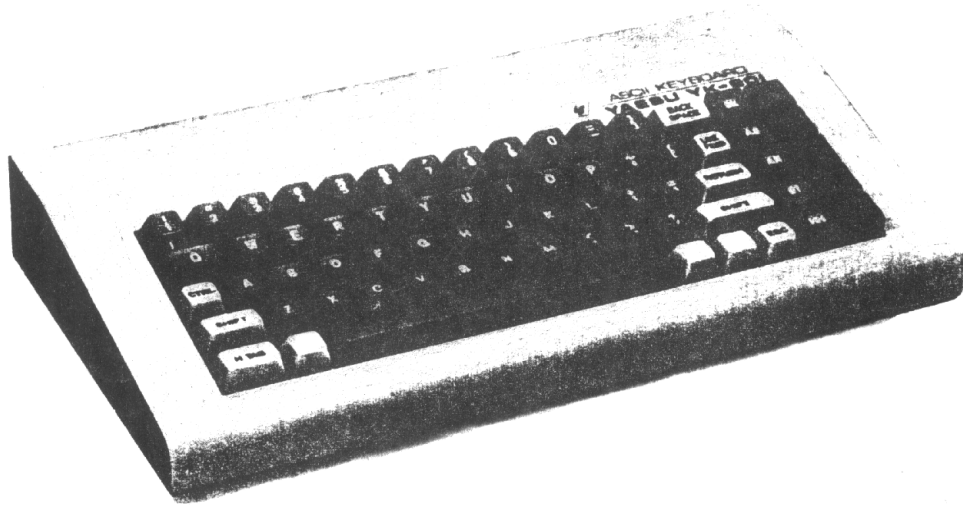
**MANUAL**

YK-901

**YAESU MUSEN CO., LTD.**

TOKYO JAPAN.

YAESU  
YK-901 ASCII KEYBOARD



GENERAL

The YK-901 is an 8-level ASCII code keyboard for the YR-901 CW/RTTY READER. Featuring MOS and LSI keyboard encoders, the YK-901 is a product of today's modern solid-state technology.

For operator convenience, the CW operating symbols  $\overline{AR}$ ,  $\overline{AS}$ ,  $\overline{BT}$ ,  $\overline{HH}$  and  $\overline{SK}$  are within easy fingertip reach, as are the commands needed for RTTY.

We recommend that you read this manual in its entirety, so as to become better acquainted with the YK-901. With proper care in operation, this unit will provide many years of reliable operation.

## SPECIFICATIONS

Code: Serial 8-bit ASCII (1 start bit, 2 stop bits)

Baud rate: 110

Number of Keys: 67

Data keys: 45

Function keys: 16

Shift keys: 3

Unidentified keys: 3

YR-901 Compatible inputs: 0 - 9 (10 figures)

A - Z (26 letters)

" , ' , ( , ) , / , ? , . , , , : , - (10 figures)

AR , AS , BT , HH , SK (5 CW operating symbols)

External connections: 7-pin DIN plug

(1.5m connecting cable attached)

Power requirements: 5 VDC

(Supplied from YR-901)

Power consumption: 0.2 A (MAX)

Case size: 354(W) x 52(H) x 180(D) mm

Weight: 2.2 Kg

## SEMICONDUCTORS

### IC

AY- <del>5</del> -2376	1
MC14011B	1
MC14017B	1
MC14069B	1
NE 555	1
SN74LS00N	1
SN74LS74N	1
SN74LS165N	1

### TRANSISTOR

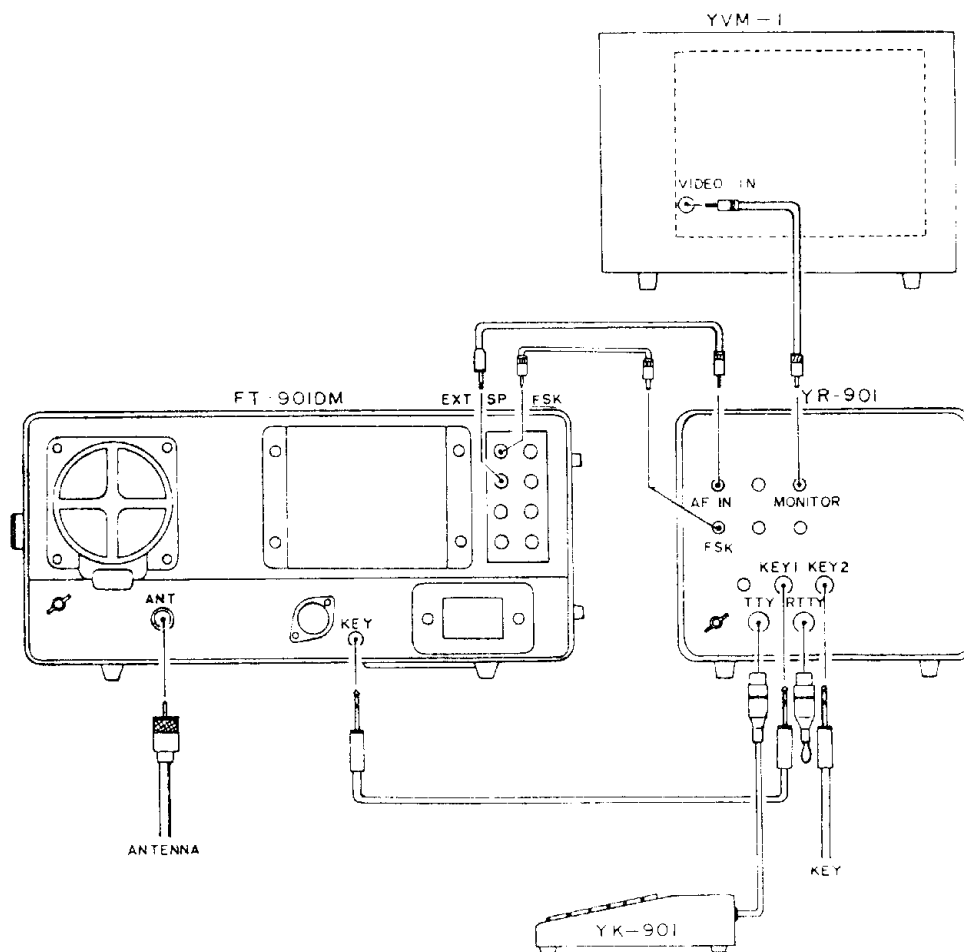
2SC1815GR	1
2SC2002L	1
<u>DIODE</u>	
ISS55	1
RD12BE	1

# INSTALLATION

The YK-901 should be positioned near the operator so that the Keyboard is easily accessible from your operating position. Excessively warm locations, such as on top of an amplifier should be avoided.

## CAUTION

PERMANENT DAMAGE CAN RESULT IF IMPROPER POWER IS APPLIED TO THIS INSTRUMENT. OUR WARRANTY DOES NOT COVER DAMAGE CAUSED BY IMPROPER POWER CONNECTIONS.

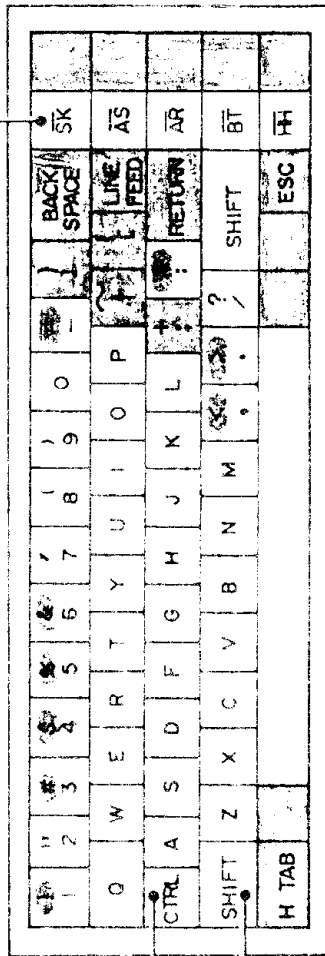
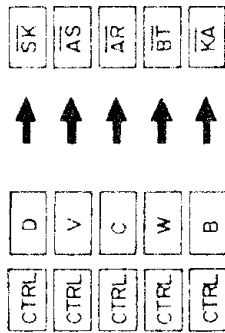



## OPERATION

- 1) Insert the 7-pin DIN plug from the YK-901 Keyboard into the TTY jack on the rear panel of the YR-901 CW/RTTY Reader. Place the YR-901 in the ON position, and the Keyboard is now ready for operation.
- 2) Be certain to insert the 6-pin DIN plug into J105 on the rear panel of the YR-901.
- 3) The YK-901 Keyboard includes a 110 baud clock, and no external clock connections will be necessary.
- 4) Place the rear apron TTY/RTTY switch in the TTY position.
- 5) When using the YK-901, the position of the 45/50 baud rate switch is inconsequential.
- 6) The YR-901 MODE switch selects the operating mode (CW/RTTY).
- 7) A. CW Operation  
When the YR-901 is first activated, the YK-901 transmitting speed will be set by the incoming signal. If no incoming signal is present, the speed will be set at 96 letters per minute for transmit.  
B. RTTY Operation  
As the YK-901 does not have a shift key, the RETURN and LINE FEED keys must be entered at the start of each line to select the correct figure/letter relationship. This can also be accomplished by operating the F/L switch on the front panel of the YR-901 (Please see the Teletype TX/RX Operation section in your Instruction Manual for details).
- 8) The YR-901 is tolerant of varying typing speeds, and the unit will hold letters that lead actual transmission. However, if you hit two keys at the same time at a high rate of speed, one of the letters may be dropped. Therefore, an even typing style is recommended.

# KEYBOARD FUNCTION ON CW

When the CTRL key and either the D, V, C, W, or B keys are pushed simultaneously, the corresponding CW symbol codes are shown on the display panel.



 = Not functional on CW

When the SHIFT key and a symbol key are pushed simultaneously, the related CW code will be displayed.


# KEYBOARD FUNCTION ON RTTY

This LINE FEED key is used to feed a line when a station is receiving your signal with a TTY machine.

1	"	2	#	3	4	5	6	7	'	(	)	0	Ⓜ	Ⓜ	Ⓜ	SR
Q	W	E	R	T	Y	U	I	O	P							SR
Ⓜ	A	S	D	F	G	H	J	K	L	+	*	:	?	?	?	SR
SHIFT	Z	X	C	V	B	N	M	,	.	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ	Ⓜ	SR
H-TAB																SR

Push RETURN key for carriage return on the display.

Note: If the receiving station is using a mechanical TTY machine, the LINE FEED key and RETURN key should always be pressed before printing on a new line.

 = Not functional on RTTY

When the SHIFT key and a symbol key are pushed simultaneously, the related TTY code will be displayed, with the exception of %, <, >, and = keys. The following characters will not appear on the display: ", "#", "\$" and ";

## CIRCUIT DESCRIPTION

### KEYBOARD

The keyboard consists of switches and a matrix encoder, AY-5-2376. When a key is pushed, the output from the matrix is fed to AY-5-2376, and the output is converted to 7-bit ASCII code (TTL Level). The strobe signal is activated when a key is pushed.

### INTERFACE

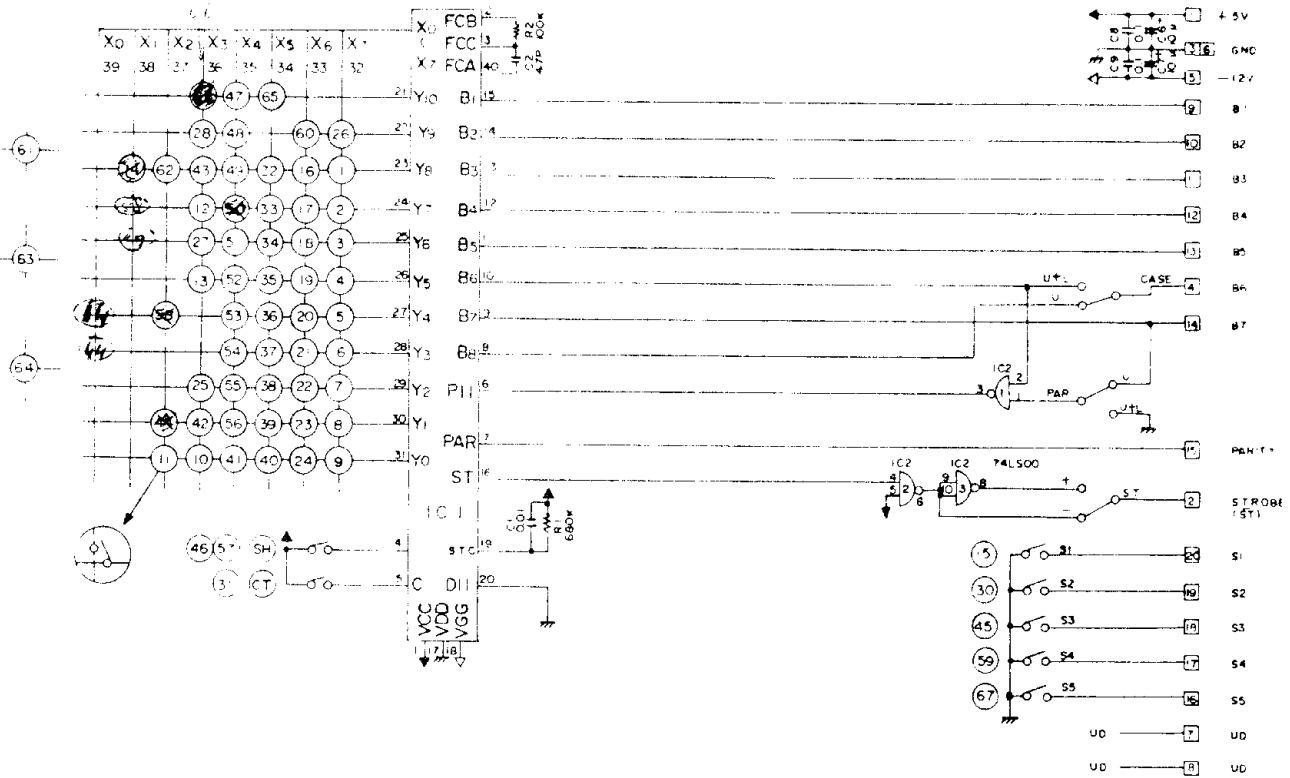
The clock pulse is approximately 9.1 mS in length, and is fed to Q02 SN74165N and Q03 SN74LS74N. This IC converts the 7-bit parallel input to serial output, and then feeds a type "D" flip-flop Q03, SN74LS74N. A start bit is added before each serial converted signal, making this signal format similar to the ASR-33. This signal is then fed to Q08, 2SC1815GR, and buffered to drive the YR-901.

The strobe signal is fed to a strobe prohibit circuit which consists of decade counter/driver Q04, MC14017, hex inverter Q05, MC1469B and quad gate Q06, MC14011B. These IC's and associated circuits control the parallel-serial interface in order to limit the flow of data from the Keyboard. The strobe signal also controls the start and stop signals.

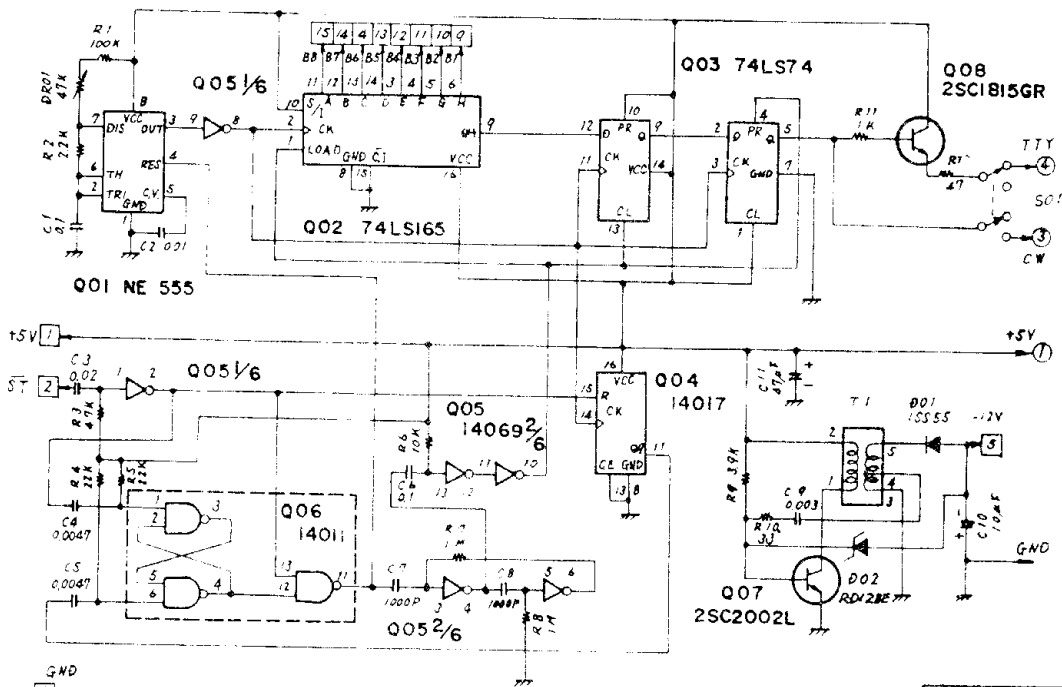
The internal DC/DC converter supplies the -12V for AY-5-2376.



AY 5-2376



YK-901  
KEY BOARD



YK-901  
CIRCUIT DIAGRAM

PB-2168

①~⑦ 7P PLUG PIN NUMBER  
①~⑤ KEY BOARD CONNECTOR PIN NUMBER

# IMPORTANT

THIS IS YOUR WARRANTY REGISTRATION CARD

RETAIN THIS HALF

Model YK-901 Serial NO. 1G050183

<b>WARRANTY REGISTRATION CARD</b>	
MODEL <u>YK-901</u>	SERIAL NO. <u>1G050183</u>
THIS CARD MUST BE MAILED TO THE DEALER WITHIN 10 DAYS FROM THE DATE OF PURCHASE.	
DATE OF PURCHASE _____	
OWNER'S NAME _____	CALL _____
ADDRESS _____	
DEALER'S NAME _____	

## **WARRANTY POLICY**

We warrant this equipment against defects in material or workmanship, with the exception of tubes and semiconductors, for a period of one year from the date of original purchase. This warranty is limited to repairing or replacing only the defective parts, and is not valid if the equipment has been tampered with, misused or damaged. If service or repair is required within the warranty period, repair will be made free of charge by the dealer through whom the equipment was purchased. If the owner requires any service or repair to any dealer through whom the equipment was not purchased, the repairing cost must be paid by the owner.

This warranty is valid if the enclosed card is properly filled in and mailed to the dealer through whom the equipment was purchased within ten days from the date of purchase, and is limited to the terms and conditions contained herein.

The manufacturer retains the right to make changes or modifications without any notice or obligation to the owner of this equipment.

**YAESU MUSEN CO., LTD.**

PLACE STAMP HERE
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