## INSTRUCTION MANUAL取扱説明書


model KP－200 MEMORY KEY


## OPERATING MANUAL FOR MEMORY KEY MODEL KP-200

## FEATURES

- The KP-200 provides 4096 bit programmable memories and 512 bit programmable memories are provided in independent 8 channel.
For long message, it provides 2048 bit programmable memories in each $A$ and $B$ channel.
- Backup batteries for stored message are provided.
- Cut in keying operation in the midst of sending memory message is available.
- Repeat function is adopted.
- The KP-200 MEMORY KEY is used CMOS ICs and silicon transistors in the circuit.
- Keying operation is available whichever transistor switch or relay switch.
- Built-in monitor speaker.
- The KP-200 MEMORY KEY can be operate at AC $117 / 220 \mathrm{~V}$ or DC 13.8 V .
- Dot and dash code are transmitted as complete code without keying speed control.


## PRE OPERATION:

- Check be made prior to actual $A C$ operation that the $A C$ selector switch which is located bottom side of the of the KP-200 is conformity with your local AC line voltage.
- Transistor keying be not exceeding rated voltage and current, otherwise damages may occur.
- Please be aware that the transistor for keying is out of objection of WARRANTEE, even the KP-200 is in validity of warrantee.



## OPERATION:

1. READ / WRITE switch

To read out memory, be position to READ and if desire to store memory, position must be WRITE.
2. SPEED / TUNE knob

Rotation to clockwise increases signal speed. TUNE position keeps TX condition of the transceiver, and this function can be make use of transmitter tuning up.
3. DOT paddle

Dot paddle operation makes dot code.
4. DASH paddle

Dash paddle operation makes dash code.
5. POWER / VOLUME knob

Use the knob both as POWER on-off and audio volume control.
6. OPERATION LED

Operation LED illuminates when power is on. Operate the paddles or works memory circuit, then LED turns on and off depending on the action.
7. STOP switch

This function be used for operation stop in the midst of memory circuit is going on, and if start again, press the CHANNEL switch. Therefore, to operate desired channel during one channel is working on, press the STOP switch first, and push desired channel switch. In this case, operation should start from from the beginning not from the stopped position.

Fig-3

| A ch | 1 ch <br> 512 Bit | 2 ch <br> 512 Bit | 3 ch <br> 512 Bit | 4 ch <br> 512 Bit | ALL switch pressure enables to operate either writing <br> or reading continuously from 1 to 4 CH of A CH in due <br> order (Total 2048 bit) |
| :---: | :---: | :---: | :---: | :---: | :--- |
| B ch | 1 ch <br> 512 Bit | 2 ch <br> 512 Bit | 3 ch <br> 512 Bit | 4 ch <br> 512 Bit | ALL switch pressure enables to operate either writing <br> or reading continuously from 1 to 4 CH of B CH in due <br> order (Total 2048 bit) |

8. ACH to BCH selector switch

It changes ACH to BCH alternately at every switch pressure and follows LED. When power is on, ACH is placed.
9. - 12. CHANNEL switch and LED

Press desired CHANNEL switch, memory circuit comes into action and illuminates LED. When operation is started, the operation LED turns on and off.
13. ALL switch

Press the switch, memory circuit comes into action in due order CH 1 to CH 4 of ACH or BCH . Indication LED of ALL switch is illuminated and CHANNEL indication also illuminates in due order depending on channel operation. Continuous operation CH 1 to CH 4 of ACH through BCH does not enable.
14. SPACE WRITING switch

This function enables to forward the bit of memory circuit without code.
If there is still remained memory capacity and not necessary to store, press the switch continuously until LED illumination goes out. This function also enables to delete unnecessary message which has been stored before.
In case of ACS switch to "OFF", it is not necessary to press this switch.
15. REPEAT switch

It enables to repeat message many times, and operation channel LED turns on and off accordingly.
Be not made codeless stand or space for more than 26 dot between word and word, otherwise repetition starts in the midst of message reading.
16. SEMI/AUTO switch

Place the switch to "AUTO", the dot and dash can operate automatically, and be write a memory at this position.
To operate as bug-key, be placed the switch to "SEMI". In this case dot code can operate automatically but dash code does not operate automatically.
17. ACS (Auto Character Space) switch

The ASC switch to "ON", the character space obtains exact 3 dot. In case of operation letter [E] and [T] as FIG-4 (II), the letter [T] should start after letter [E] with taking exact 3 dot space and appears the letter exactly [E] and [T] whichever dash paddle operation time point is started (2) to (4) in FIG-4 (II). However, in case of operation letter [A] at more faster speed and operation timing should delayed a little than the time point (2) in FIG-4 (II), the letter appears two letters of [E] and [T], as space between dot and dash takes exact 3 dot. Therefore, it is recommended to select switch position to "ON" or "OFF" depending on your operation speed.
In case of ASC switch to "OFF", as FIG-5 in the timing point after (2), the dash or dot starts at paddle operation be started whichever the timing point is started at anywhere after (2).


Fig-5

18. TONE volume control

It enables to change oscillation frequency of monitor audio volume. [L] obtains low tone and $[\mathrm{H}]$ obtains high tone.
19. WEIGHT volume

The ratio of dot to dash is 1:3 at MIN position, but the ratio be changed as shown in FIG-6 at MAX position.


Fig-7


## 20. DC jack

Plug in external DC power supply. (DC $13.8 \mathrm{~V}, 40$ to 100 mA )

## 21. KEYING selector switch

It enables to select transistor keying or relay keying. Select the switch position depending on key terminals of the transceiver.

## 22. KEYED LINE terminal

Be connect keyed line to key terminals of the transceiver.
a) In case of transistor keying (+) to (E) connection enables PLUS keying and (-) to (E) connection enables MINUS keying. Permissible voltage and current is less than 150 VDC, 1 A at PLUS keying, and 120 VDC, 15 mA at MINUS keying. Keyed line connection must be depending on condition of the transceiver.
b) In case of relay keying, connection must be (+) to (E) and polarity of the transceiver is not affected. Permissible voltage and current is less than 500 VDC, 0.5 A .

## 23. PHONE jack

Be make use of external speaker or earphone.

## 24. AC line FUSE Holder

A 0.5 A fuse should be installed here.

## 25. AC POWER selector switch

Select and set the switch to your local line voltage.

## ADJUSTING:

To adjust manipulator, following procedures are recommended (Refer to FIG-8)

1. Remove the bottom case. Be sure that $A C$ cord should disconnect from $A C$ outlet before remove the case.
2. To adjust contact point of the lever, loosen locking screw of the contact point and adjust space as you like, and then lock the screw. Same procedure to other lever is required.
3. To adjust spring tension of the lever, loosen locking nut and adjust tension by spring tension screw, and then lock the nut.


## BACKUP BATTERY LOADING:

Remove bottom case, and load batteries into built in holder. The batteries be able to use for more than one year, but to avoid solution leakage, early exchange is recommended.

## NOTE FOR WRITING MEMORY:

1. Be sure that REPEAT switch to be OFF.
2. WRITE position of READ/WRITE switch keeps memory condition, but not works memory circuit until paddle paddle operation be started. But need your care about following matters.

* In condition of ASC switch to "ON". When memory keying stops, memory circuit also follows and stops with taking exact 3 dot space, therefore it would be possible to write a message slowly without confusion.
If desire to take a space between a "WORD" and "WORD", once press the Space Writing switch $\downarrow$, after made a word. It takes a space with exact 7 dot, but don't be press it continuously, otherwise many spaces go on under codeless condition.
« In condition of ASC switch to "OFF". Once stops paddle operation during operation, memory circuit comes into action to store until memory capacity is filled up. Therefore, don' $\dagger$ be rest from paddle operation in the midst of operation.

3. To correct contents of memory in the midst of writing memory, press the STOP switch first and place the READ/WRITE switch to READ, and press the proper channel switch for monitor from initial memory message. And immediately change READ/WRITE switch to WRITE before the word of which is included error.
As memory condition is keeping but memory circuit not works until paddle operation be started at this occasion, starts paddle operation to correct message, correction succeeds while writing.
Pressure of ALL CHANNEL switch enables to store in (1) to (4) channel continuously in each ACH or BCH.
It is useful for long message programmable memory.

## NOTE FOR REPETITION

Repetition starts at continuous 26 dot codeless space, but if desire to change repeat point, following modification are recommended. (Refer to FIG-9)

Be modify center part of the circuit board which is marked $\rightarrow$.
a) Cut the pattern (D) to (E) and connect (E) to (C), repetition starts after continues 10 dot codeless space.
b) Cut the pattern (D) to (E) and connect (E) to (F), repetition starts after continues 14 dot codeless space.
c) Cut the pattern (B) to (C) and connect (C) to (E), repetition starts after continues 18 dot codeless space.
d) Cut the pattern (B) to (C) and connect ( $C$ ) to ( $F$ ), repetition starts after continues 22 dot codeless space

## CAUTION

# MUST BE PREVENT ELECTRIC LEAKAGE FROM SOLDERING IRON IN SOLDERING PROCESS FOR CONNECTION. TO PROTECT LEAKAGE, SOLDERING IRON BE GROUNDED. ELECTRIC LEAKAGE MAY OCCUR DAMAGES OF CMOS IC. 

## NOTE FOR CUT IN OPERATION

The KP-200 enables cut in (interrupt) operation between memory contents by optional paddle operation during reading memory contents are going on, but please be care followings.

* Don't be made cut in operation in the middle of the word, it may cause wrong letter appearance at the position of before and after of interrupted letter. Therefore, it is important to take enough room of spaces.


## SPECIFICATIONS

| Power source: | $\begin{aligned} & \text { AC } 100-117 / 220-240 \mathrm{~V} \\ & \text { DC } 13.8 \mathrm{~V}, 40-100 \mathrm{~mA} \end{aligned}$ |
| :---: | :---: |
| Backup Battery: | $3 \times A A$ |
| Memory Capacity: | 4 kBit, 8 channel |
| Keying Circuit: | Transistor keying <br> * PLUS keying: 150 V, 1 A <br> $\star$ MINUS keying: $120 \mathrm{~V}, 15 \mathrm{~mA}$ <br> $\star$ Relay keying: $500 \mathrm{~V}, 0.5 \mathrm{~A}$ |
| Dimensions: | $140 \mathrm{~W} \times 75 \mathrm{H} \times 2520(\mathrm{~mm})$ (including paddles) |
| Weight: | 1.8 kg (approx.) |
| Accessories: | DC plug, phone plug and batteries (AM 3) |



