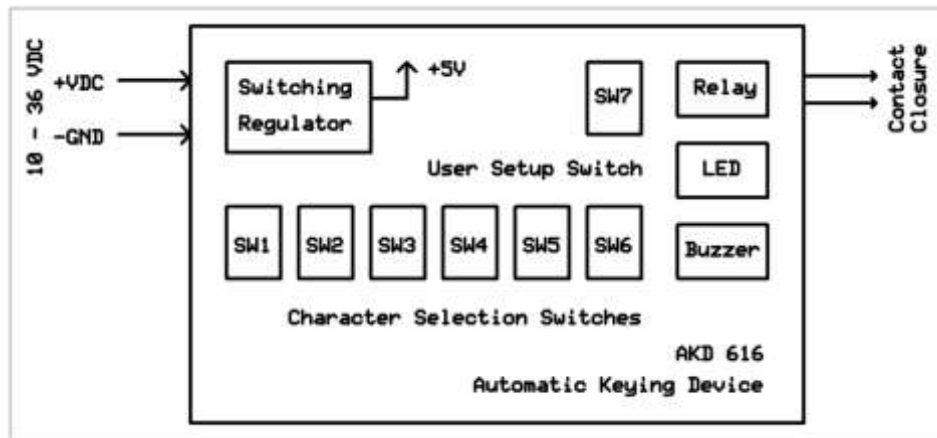


AKD 616 – Automatic Keying Device



Block Diagram

Features :-

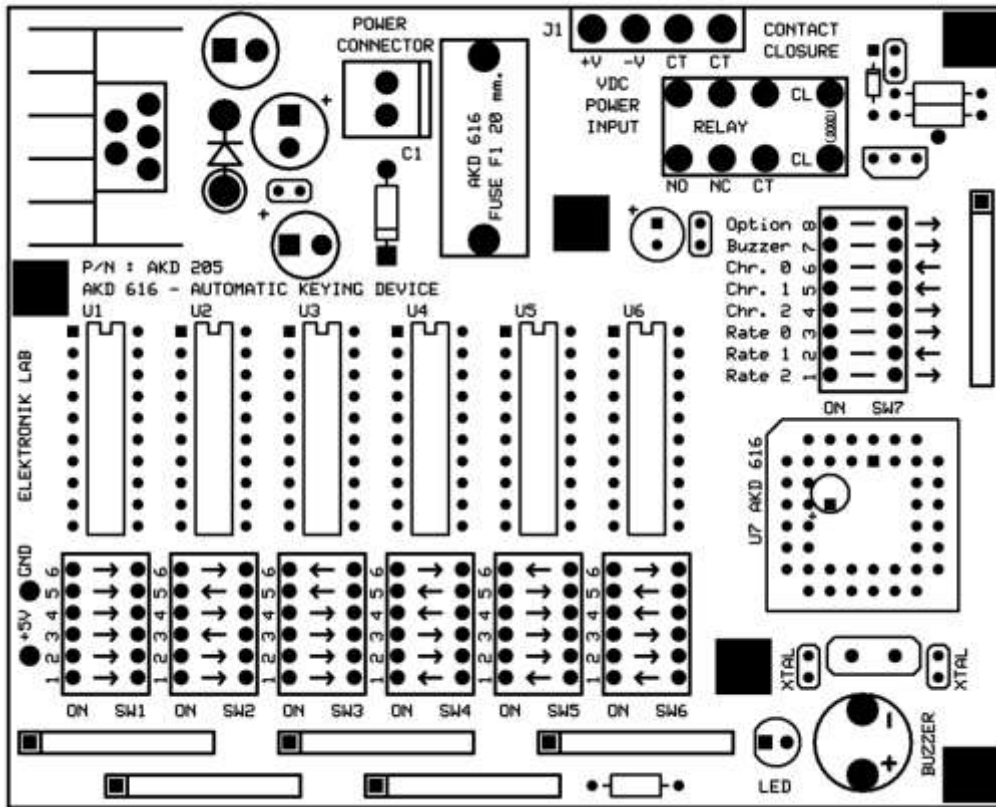
- Up to **6 Character** Morse Code Selection.
- Characters selectable between **26 Alphabets, 10 Numbers & 21 Special Characters**.
- High Speed **Contact Closure Relay** Output.
- Keying Rate Selectable from **55ms. to 250ms.**
- Inter Character Sequence Tone Time Period selectable from **1 Sec. to 64 Sec.**
- On – Board **LED** for **Visual** indication of the Transmitted Morse Code.
- On – Board **Peizo Buzzer** for **Audible** indication of the Transmitted Morse Code.

Technical Specifications :-

DC Power Supply Input

- DC Power Supply Input : **10VDC to 32VDC @ 5 Watts.**
- Voltage Regulator : On – Board , **Switching Mode** Regulator.
- Safety : **Fuse** Protection and **Reverse Polarity** Protection.
Thermal Shutdown and **Current Limit** Protection.

User Manual



AKD 616 Automatic Keying Device PCB Layout
P / N : AKD 205

➤ **Setting the Keying Rate**

The Keying Rate of the Morse Code can be set between & including **55ms.** to **250ms.** in a total of **8** steps. This selection can be done using the Switch Nos. **1 (Rate 2)**, **2 (Rate 1)** & **3 (Rate 0)** on the **8 Way Switch SW7**. The factory default value for the Keying Rate is set at **125ms.** See Table – 1.

Table 1 - Keying Rate Selection Table

8 Way Switch SW7	Rate 2 Switch 1	Rate 1 Switch 2	Rate 0 Switch 3
Keying Rate			
250ms.	Off	Off	Off
166.67ms.	Off	Off	On
125ms.	Off	On	Off
100ms.	Off	On	On
83.33ms.	On	Off	Off
71.43ms.	On	Off	On
62.5ms.	On	On	Off
55ms.	On	On	On

➤ **Setting the No. of Characters**

The No. of Morse Code Characters can be selected between & including 1 to 6. This selection can be done using the Switch Nos. **4 (Chr. 2)**, **5 (Chr. 1)** & **6 (Chr. 0)** on the **8 Way Switch SW7**. The factory default value for the No. of Morse Code Characters is set to **3 Characters**. See Table – 2.

Table 2 - No. of Characters Selection Table

8 Way Switch SW7	Chr. 2 Switch 4	Chr. 1 Switch 5	Chr. 0 Switch 6
No. of Chrs.			
No. Chrs.	Off	Off	Off
1 Chr.	Off	Off	On
2 Chrs.	Off	On	Off
3 Chrs.	Off	On	On
4 Chrs.	On	Off	Off
5 Chrs.	On	Off	On
6 Chrs.	On	On	Off
Test Chrs.	On	On	On

➤ **Setting the Morse Code Character Selection**

The AKD 616 supports 26 Alphabets from A – Z, 10 Numbers from 0 – 9 & 21 other Special Characters as the Full Set of Valid User Selectable Morse Code Characters. The setting of the same is done using the **6 Way Switches SW1 to SW6**. The factory default Character Selections for the Switches SW1 to SW6 is set as **A K D 6 1 6**. The Morse Code will be transmitted in the sequence starting from the switch setting of Switch SW1 to the switch setting of Switch SW6. See Table – 3.



➤ **Setting the Buzzer Tone**

The Buzzer Tone of the On-Board Peizo Buzzer can be selected as **Silent (Off)** or **Audible (On)**. This selection can be done using the Switch No. **7 (Buzzer)** on the **8 Way Switch SW7**. The factory default value for the Buzzer Tone is set to **Silent (Off)**.

➤ **Setting the Inter Character Sequence Tone Time Period**

The Inter Character Sequence Tone Time Period can be selected between & including **1 Sec.** to **64 Sec.** in a total of **64** steps. This selection can be done using the **6 Way Switch SW6**. This selection is activated only if the Switch No. **8 (Option)** on the **8 Way Switch SW7** is set in the **On** position. Setting the Switch No. **8 (Option)** on the **8 Way Switch SW7** to the **Off** position will set the Inter Character Sequence Tone Time Period to a fixed Time Period of **10 Sec.** See Table – 4.

Note : With the Switch No. **8 (Option)** on the **8 Way Switch SW7** is set in the **On** position ; the maximum No. of Morse Code Characters selectable is only up to **5 Characters**.

Table 3 - Morse Code Character Selection Table

Character		Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6
A	. -	Off	Off	Off	Off	Off	Off
B	- . . .	Off	Off	Off	Off	Off	On
C	- . - .	Off	Off	Off	Off	On	Off
D	- . .	Off	Off	Off	Off	On	On
E	. - - -	Off	Off	Off	On	Off	Off
F	. . - .	Off	Off	Off	On	Off	On
G	- - - .	Off	Off	Off	On	On	Off
H	. . . .	Off	Off	Off	On	On	On
I	. .	Off	Off	On	Off	Off	Off
J	. - - -	Off	Off	On	Off	Off	On
K	- . -	Off	Off	On	Off	On	Off
L	. - . .	Off	Off	On	Off	On	On
M	- -	Off	Off	On	On	Off	Off
N	- .	Off	Off	On	On	Off	On
O	- - -	Off	Off	On	On	On	Off
P	. - - .	Off	Off	On	On	On	On
Q	- - . -	Off	On	Off	Off	Off	Off
R	. - .	Off	On	Off	Off	Off	On
S	. . .	Off	On	Off	Off	On	Off
T	- - -	Off	On	Off	Off	On	On
U	. . -	Off	On	Off	On	Off	Off
V	. . . -	Off	On	Off	On	Off	On
W	. . - -	Off	On	Off	On	On	Off
X	- . . -	Off	On	Off	On	On	On
Y	- . - -	Off	On	On	Off	Off	Off
Z	- - . .	Off	On	On	Off	Off	On
0	- - - - -	On	Off	Off	Off	Off	Off
1	. - - - -	On	Off	Off	Off	Off	On
2	. . - - -	On	Off	Off	Off	On	Off
3	. . . - -	On	Off	Off	Off	On	On
4	. . . . -	On	Off	Off	On	Off	Off
5	. . . . .	On	Off	Off	On	Off	On
6	-	On	Off	Off	On	On	Off
7	- - . . .	On	Off	Off	On	On	On
8	- - - . .	On	Off	On	Off	Off	Off
9	- - - - .	On	Off	On	Off	Off	On
[.]	. - . - . -	On	Off	On	Off	On	Off
[,]	- - . . - -	On	Off	On	Off	On	On
[?]	. . - - . .	On	Off	On	On	Off	Off
[/]	- . . - .	On	Off	On	On	Off	On
[+]	. - . - .	On	Off	On	On	On	Off
[*]	. . . - . -	On	Off	On	On	On	On
[=]	- . . . -	On	On	Off	Off	Off	Off
[:]	- . - . - .	On	On	Off	Off	Off	On
[;]	- - - . . .	On	On	Off	Off	On	Off
[']	. - - - - .	On	On	Off	Off	On	On
["]	. - . . - .	On	On	Off	On	Off	Off
[_]	- -	On	On	Off	On	Off	On
[]	. . - - . -	On	On	Off	On	On	Off



[\$]			•	•	•	-	•	•	-		On	On	Off	On	On	On
[(					-	•	-	-	•		On	On	On	Off	Off	Off
)]				-	•	-	-	•	-		On	On	On	Off	Off	On
[&]					•	-	•	•	•		On	On	On	Off	On	Off
[!]					•	•	•	-	•		On	On	On	Off	On	On
[%]					-	•	-	•	-		On	On	On	On	Off	Off
[@]		•	•	•	•	•	•	•	•		On	On	On	On	Off	On
[#]				•	-	•	-	•	•		On	On	On	On	On	Off

Table 4 - Inter Character Sequence Tone Time Period Selection Table



6 Way Switch SW6	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6
1 Sec.	Off	Off	Off	Off	Off	Off
2 Sec.	Off	Off	Off	Off	Off	On
3 Sec.	Off	Off	Off	Off	On	Off
4 Sec.	Off	Off	Off	Off	On	On
5 Sec.	Off	Off	Off	On	Off	Off
6 Sec.	Off	Off	Off	On	Off	On
7 Sec.	Off	Off	Off	On	On	Off
8 Sec.	Off	Off	Off	On	On	On
9 Sec.	Off	Off	On	Off	Off	Off
10 Sec.	Off	Off	On	Off	Off	On
11 Sec.	Off	Off	On	Off	On	Off
12 Sec.	Off	Off	On	Off	On	On
13 Sec.	Off	Off	On	On	Off	Off
14 Sec.	Off	Off	On	On	Off	On
15 Sec.	Off	Off	On	On	On	Off
16 Sec.	Off	Off	On	On	On	On
17 Sec.	Off	On	Off	Off	Off	Off
18 Sec.	Off	On	Off	Off	Off	On
19 Sec.	Off	On	Off	Off	On	Off
20 Sec.	Off	On	Off	Off	On	On
21 Sec.	Off	On	Off	On	Off	Off
22 Sec.	Off	On	Off	On	Off	On
23 Sec.	Off	On	Off	On	On	Off
24 Sec.	Off	On	Off	On	On	On
25 Sec.	Off	On	On	Off	Off	Off
26 Sec.	Off	On	On	Off	Off	On
27 Sec.	Off	On	On	Off	On	Off
28 Sec.	Off	On	On	Off	On	On
29 Sec.	Off	On	On	On	Off	Off
30 Sec.	Off	On	On	On	Off	On
31 Sec.	Off	On	On	On	On	Off
32 Sec.	Off	On	On	On	On	On
33 Sec.	On	Off	Off	Off	Off	Off
34 Sec.	On	Off	Off	Off	Off	On
35 Sec.	On	Off	Off	Off	On	Off
36 Sec.	On	Off	Off	Off	On	On
37 Sec.	On	Off	Off	On	Off	Off
38 Sec.	On	Off	Off	On	Off	On
39 Sec.	On	Off	Off	On	On	Off
40 Sec.	On	Off	Off	On	On	On
41 Sec.	On	Off	On	Off	Off	Off
42 Sec.	On	Off	On	Off	Off	On
43 Sec.	On	Off	On	Off	On	Off
44 Sec.	On	Off	On	Off	On	On
45 Sec.	On	Off	On	On	Off	Off
46 Sec.	On	Off	On	On	Off	On
47 Sec.	On	Off	On	On	On	Off
48 Sec.	On	Off	On	On	On	On
49 Sec.	On	On	Off	Off	Off	Off
50 Sec.	On	On	Off	Off	Off	On
51 Sec.	On	On	Off	Off	On	Off
52 Sec.	On	On	Off	Off	On	On
53 Sec.	On	On	Off	On	Off	Off
54 Sec.	On	On	Off	On	Off	On
55 Sec.	On	On	Off	On	On	Off
56 Sec.	On	On	Off	On	On	On
57 Sec.	On	On	On	Off	Off	Off
58 Sec.	On	On	On	Off	Off	On
59 Sec.	On	On	On	Off	On	Off
60 Sec.	On	On	On	Off	On	On
61 Sec.	On	On	On	On	Off	Off
62 Sec.	On	On	On	On	Off	On
63 Sec.	On	On	On	On	On	Off
64 Sec.	On	On	On	On	On	On



Contact Address (Office):

ELEKTRONIK LAB

R/13 Navroz Baug

Lalbaug

Mumbai 400012

INDIA

Telephone : +91 22 24715115

Fax : +91 22 24710444

Email : elab@vsnl.com

Contact Address (Works):

ELEKTRONIK LAB

Ram Nagar Flat No. 3

Victoria Garden Road, Byculla (E)

Mumbai 400027

INDIA

+91 22 23730125 / 23702604 / 23780787

Web: elektroniklab.co.in