# Tap code

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The **tap code**, sometimes called the **knock code**, is a way to encode text messages on a letter-by-letter basis in a very simple way. The message is transmitted using a series of tap sounds, hence its name.

The tap code has been commonly used by prisoners to communicate with each other. The method of communicating is usually by tapping either the metal bars, pipes or the walls inside a cell.

Roman alphabet tap code							
	1	2	3	4	5		
1	A	В	C/K	D	Е		
2	F	G	Н	Ι	J		
3	L	M	N	O	P		
4	Q	R	S	Т	U		
5	V	W	X	Y	Z		
The tap code table							

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## Design

The tap code is based on a Polybius square using a  $5\times5$  grid of letters representing all the letters of the Latin alphabet, except for K, which is represented by C.

The listener only needs to discriminate the timing of the taps to isolate letters.

Each letter is communicated by tapping two numbers

the first designating the row

the second designating the column

For example, to specify the letter "B", one taps once, pauses, and then taps twice.

Or to communicate the word "water", the cipher would be the following (the pause between each number in a pair is smaller than the pause between letters):

W	A	T	E	R
5, 2	1, 1	4, 4	1, 5	4, 2
		••••		

The letter "X" is used to break up sentences, and "K" for acknowledgements.

Because of the difficulty and length of time required for specifying a single letter, prisoners often devise abbreviations and acronyms for common items or phrases, such as "GN" for *Good night*, or "GBU" for *Good bless you*.<sup>[1]</sup>

By comparison, Morse code is harder to send by tapping or banging because it requires the ability to create two differently sounding taps (representing the *dits* and *dahs* of Morse code). A Morse code novice would also need to keep a "cheat sheet" until he or she remembers every letter's code, which the captors would likely confiscate. Tap code can be more easily decoded in one's head by mentally using the table. For example, if you hear four knocks, you would think A... F... L... Q as the count increased; then after the pause, you hear three knocks and think Q... R... S to arrive at the letter S.

### History

The origins of this encoding go back to the Polybius square of Ancient Greece. As the "knock code", a Cyrillic script version is said to have been used by nihilist prisoners of the Russian czars.<sup>[2]</sup> The knock code is featured in Arthur Koestler's classic 1941 work *Darkness at Noon*.<sup>[3]</sup>

United States prisoners of war during the Vietnam War are most known for having used the tap code. It was introduced in June 1965 by four POWs held in the Hoa Lò Prison "Hanoi Hilton" prison: Captain Carlyle "Smitty" Harris, Lieutenant Phillip Butler, Lieutenant Robert Peel, and Lieutenant Commander Robert Shumaker. [1] Harris had heard of the tap code being used by prisoners in World War II<sup>[4]</sup> and remembered a United States Air Force instructor who had discussed it as well. [1]

In Vietnam, the tap code became a very successful way for otherwise isolated prisoners to communicate. [4] POWs would use the tap code in order to communicate to each other between cells in a way which the guards would be unable to pick up on. They used it to communicate everything from what questions interrogators were asking (in order for everyone to stay consistent with a deceptive story), to who was hurt and needed others to donate meager food rations. It was easy to teach and newly arrived prisoners became fluent in it within a few days. [5][6] It was even used when prisoners were sitting next to each other but not allowed to talk, by tapping on anothers' thigh. [6] By overcoming isolation with the tap code, prisoners were able to maintain a chain of command and keep up morale. [4]

#### References

- 1. "'Return with Honor': The Tap Code". *American Experience*. PBS. 1999. Retrieved 2008-04-08.
- 2. David Kahn, *The Codebreakers The Story of Secret Writing*. 1967. ISBN 978-0-684-83130-5.
- 3. Koestler, Arthur, *Darkness at Noon* (1941). Translated by Daphne Hardy. See page 19 of the Bantam Publishing paperback, 1981 printing for more info.
- 4. Staff Sgt. Jason Tudor (1998-03-18). "Vets, Flyers discuss ideology, time in POW camps". Air Force News Service. Retrieved 2008-04-08.
- 5. McCain, John; Mark Salter (1999). *Faith of My Fathers*. Random House. pp. 211 –12. ISBN 0-375-50191-6.
- 6. Brace, Ernest C. (1988). *A Code to Keep: The true story of America's longest held civilian prisoner of war in Vietnam*. St. Martin's Press. pp. 171–72, 187–88. ISBN 0-7090-3560-8.

#### **External links**

- Online Tap Code Encoder/Decoder (http://www.braingle.com/brainteasers/codes/tapcode.php)
- Russian Prison Tap Codes (http://faroutliers.blogspot.com/2005/04/russian-prison-tapping-code.html)
- http://www.premioceleste.it/opera/ido:260668/ Artist An Degrida's Tap Code artistic illustration.

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