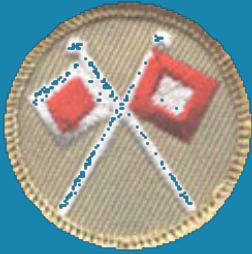


## 2010 HISTORICAL MERIT BADGE PROGRAM



# Signaling

First offered in 1911—discontinued in 1992

**A HUNDRED YEARS AGO, THERE WERE NO CELL PHONES OR COMPUTERS.**

**HOW DID PEOPLE COMMUNICATE OVER LONG DISTANCES?**

**THEY USED FLASHES OF LIGHT, DOTS, DASHES, AND FLAGS.**

**WHAT DO WE HAVE TODAY THAT REPLACES HOW PEOPLE ONCE COMMUNICATED?**



### Requirements

To obtain a Merit Badge for Signaling, a Scout must:

1. Make an electric buzzer outfit, wireless, blinker, or other signaling device.

2. Send and receive in the International Morse Code, by buzzer or other sound device, a complete message of not less than 35 words, at a rate of not less than 35 letters per minute.



These are the original requirements written in 1911. Think about how times have changed as you complete the requirements a Scout your age would have done a hundred years ago.

Whether a signaling device is electronic or not, in its simplest state it works by showing “on” or “off.” Today, we use computers for most of our communications. At its most basic level, a computer is just a collection of switches that turn on and off very rapidly.

Originally created for Samuel F. B. Morse's electric telegraph in the early 1840s, Morse code was also extensively used for early radio communication beginning in the 1890s. In the early part of the 20<sup>th</sup> century, the majority of high-speed international communication was conducted in Morse code, using telegraph lines, undersea cables, and radio circuits. The *Titanic* used Morse code on a simple wireless to plea for help.

A . —	U . . —
B — . . .	V . . . —
C — . — .	W . — —
D — . .	X . . . —
E .	Y — . — —
F . . — .	Z — — . .
G — — .	
H . . . .	
I . .	
J . — — —	
K — . —	
L . — . .	
M — —	
N — .	
O — — —	
P . — — .	
Q — . — .	
R . . .	
S . . .	
T —	
	1 . — — — —
	2 . . — — —
	3 . . . — —
	4 . . . .
	5 . . . . .
	6 — . . . .
	7 — — . . .
	8 — — — . .
	9 — — — — .
	0 — — — — —

## 2010 HISTORICAL MERIT BADGE PROGRAM

# Signaling

### Requirements (cont.)

3. Demonstrate an ability to send and receive a message in the International Morse Code by wigwag and by blinker or other light signaling device at the rate of not less than 20 letters per minute.

Wigwag signaling was performed during daylight with a single flag tied to a hickory staff constructed in four-foot jointed sections. Flags were generally made of cotton, linen, or another lightweight fabric. Waving the flag around on the left and right side indicates the dots and dashes of Morse code. Because this method uses Morse code, a single letter could take up to five waves of the flag. Below is a page from the 1940 *Signaling* merit badge book. Notice the reference to the red color of the flags even though the photos are in black and white.



Against a dense, dark background you see how much more plainly the white flag stands out than the red flag. The same conditions hold true against shadowed sides of buildings and dark skies.



#### WHAT'S BEHIND YOU?

Are you sure the other fellow can see your signals plainly? The dominant color of your flag and the character of your background make a great deal of difference in signaling visibility.

Note the contrasts pictured here.



The red flag, you see here, stands out best on the horizon against a daylight sky. The red flag is also best to use when the background is snow, water or the brighter faces of rocks and of light colored buildings



The blinker device was often used by the Navy to signal Morse Code from ship to ship. During World War II, blinker communication was especially important when sailing through areas known to have enemy submarines. Early Scout flashlights and even children's toys had a "flash" mode designed for use with Morse code.

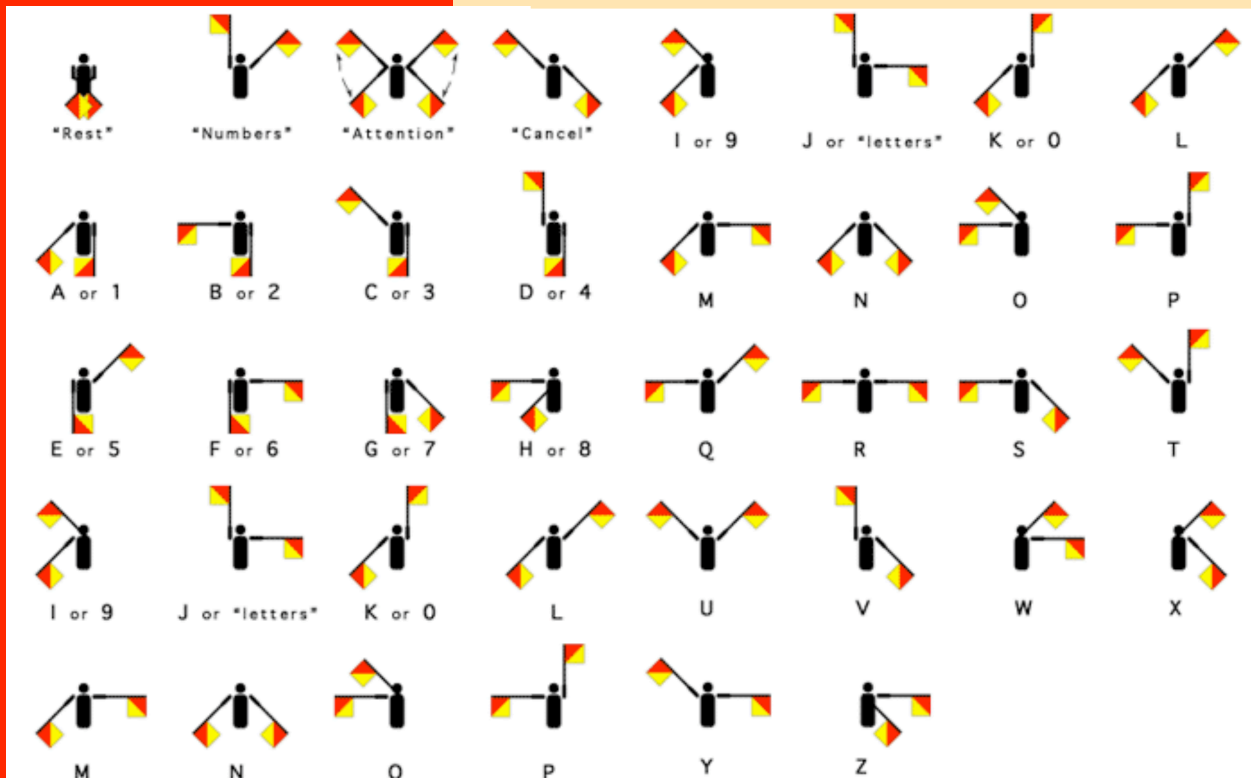
# 2010 HISTORICAL MERIT BADGE PROGRAM

## Signaling

### Requirements (cont.)

4. Send and receive by Semaphore Code at the rate of not less than 30 letters per minute.

While wigwag uses a single flag to wave out each letter, Semaphore code uses two flags held in different positions to indicate each letter. The biggest advantage to Semaphore code is that it can be signaled much faster than Morse code.





## 2010 HISTORICAL MERIT BADGE PROGRAM

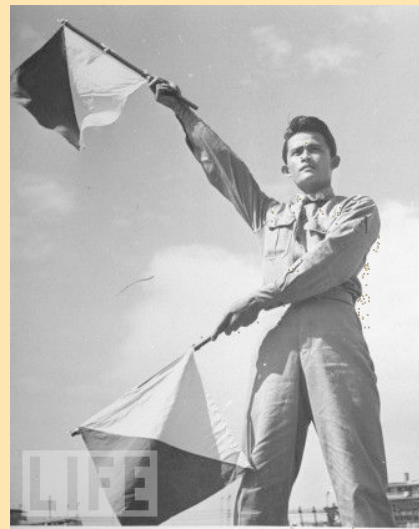
# Signaling

### Requirements (cont.)

5. Know the proper application of the International Morse and Semaphore Codes; when, where, and how they can be used to best advantage.



Now that you can send and receive messages using both Morse and Semaphore codes, can you think of times that one method would be better to use than the other? We look at these methods as being old-fashioned, but early Scouts didn't have handheld radios and cell phones available for use. Think of the changes that have taken place in the last hundred years.



6. Discuss briefly various other codes and methods of signaling which are in common use.

Now that we are in the digital age and computers are in our daily life, the old ways of signaling are simply not around today. By 1992, these methods were in such little use that the Signaling merit badge was discontinued. Think about your life today and how people communicate over distance. What inventions have been developed over the last one hundred years? What part did the old signaling methods play in the evolution of technology?

**THIS HISTORICAL MERIT BADGE WILL ONLY BE AVAILABLE DURING THE 100TH ANNIVERSARY YEAR OF SCOUTING. THE SIGNALING MERIT BADGE COUNTS TOWARD RANK ADVANCEMENT. REQUIREMENTS MUST BE COMPLETED BY DEC. 31, 2010.**

