



CTS OPTIONAL TRAINING COMMUNICATIONS



TRADE BADGE: COMMUNICATOR

This cadet must be proficient in all aspects of communications, both verbal, messaging, and transcribing. This cadet must be able to send and receive **ALL** of the following:

- Semaphore - Five words a minute
- Morse Code - Five words a minute
- Phonetic Alphabet - Five words a minute

Do This... ...Get This

SEMAPHORE SKILLS BADGE



COMM.01 - SEMAPHORE Introduction and Brief History

Semaphore was designed to enable a naval communicator to rapidly send accurate and secure messages over a short distance during daylight. Technology limited the need for semaphore in today's navies and from 2007 through 2015, it was phased out to be replaced with paddles for use in modern replenishment at sea operations. Having the cadets learn semaphore *will* connect them to the history and tradition of communications in the Royal Canadian Navy.

Semaphore is a visual signaling procedure that dates back, in its present form, to the 18th century. The two hand flags are red and yellow in colour, split diagonally, with the red side opposite the handle. Both flags are used in combination to form letters and numbers. Since the receiver must be able to clearly see the sender, this type of communication is used during daylight over short distances.

Semaphore signaling allows for rapid transmission of characters between stations. Since there is always the possibility of someone intercepting an electronic transmissions, the simplicity of using flags to communicate is very appealing.

Flag semaphore originated in 1866 as a handheld version of the optical telegraph system of Home Riggs Popham used on land. The land system consisted of lines of fixed stations (substantial buildings) with two large, moveable arms pivoted on an upright member. Such a system was inconvenient to install on board a ship. Flag semaphore provided an easy method of communicating ship-to-ship or ship-to-shore when the distances were not too great.

Along with Morse code, flag semaphore continues to be a subject of study and training.

Flag semaphore signaling uses two flags, held in specific positions to signify letters and numbers.

Semaphore uses the same 26 letters of the alphabet to make up words plus several special signals such as "Error", "Cancel/Annul", "Numbers to Follow", and "End of Word/Space/Break".

Semaphore Technique

When signaling, it must be done in the *mirror* of what is shown on the sheet. This allows the receiver to read the signalling properly. Technique is extremely important to having semaphore received and understood. Keep focused on technique throughout all flag semaphore exercises.

To grip a semaphore flag correctly, follow these steps:

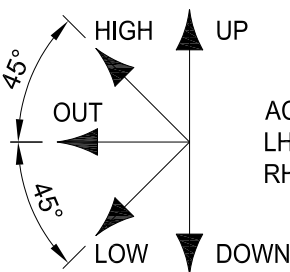
STAND AT EASE: Your feet should be shoulder-width apart and your body and chest should be positioned to be directly in line with your receiver. The feet are slightly separated to anchor against wind or other adverse weather conditions while the body is positioned to minimize confusion to where the semaphore is directed.

EXTEND THE INDEX FINGER: Grip the flag handle at the bottom corner of the flag, making sure you have a good grip on both the handle and the flag. Point your index finger along the handle toward the top of the flag while keeping your other three fingers wrapped around the handle. This position will help keep the handle inline with the rest of your arm and minimize the flag angling away from the arm.

KEEP YOUR ELBOWS LOCKED: All flag movements require a straight arm and angle accuracy. As you transition from one letter to the next, all movements must be completed with a straight arm swing. Use the shortest distance possible to get to the next letter.

ANGLE ACCURACY: Stay as close to 45° low and 45° high when flagging diagonally so there is zero confusion between diagonal positioning and having the flags down, out, or up.

Flag Directions Terminology



ACROSS: ACROSS THE BODY
LH: LEFT HAND
RH: RIGHT HAND



COMM.01 - SEMAPHORE Rotator Cuff Exercises

Semaphore movements work the shoulders and upper body more than any other muscle groups in the body. Proper focus on the body is required to prepare and warm up the muscles to be used, thereby minimizing injury otherwise brought on by semaphore. Use this exercise guide before all semaphore executions to stay safe and keep proper form.

Youtube is an excellent source for discovering additional exercises. Simply search Youtube for "Easy Rotator Cuff Exercises". Remember to stay within your own accepted comfort zone and range of movement. All physical activity and exercise could potentially result in injury or harm. By participating, you assume all risks and liabilities associated with these exercises.

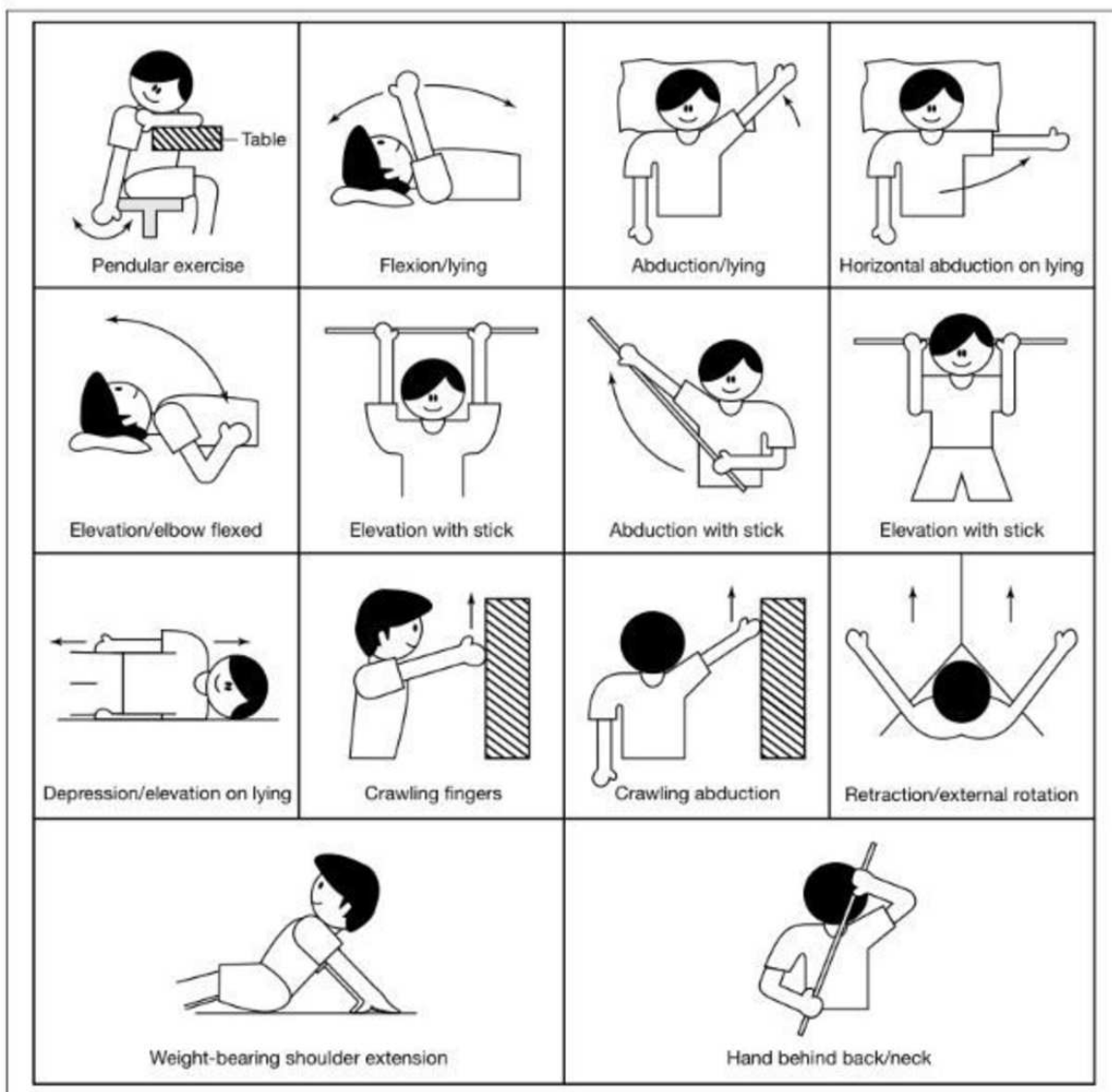
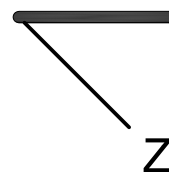
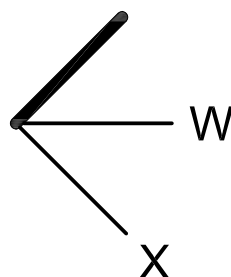
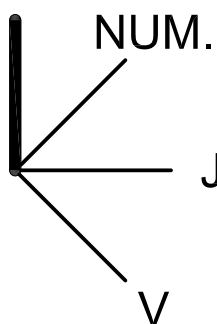
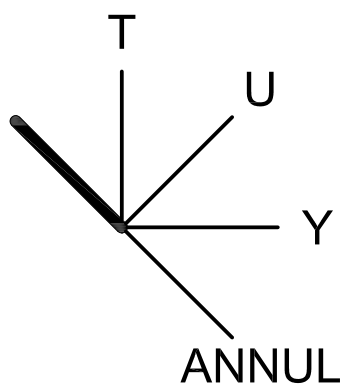
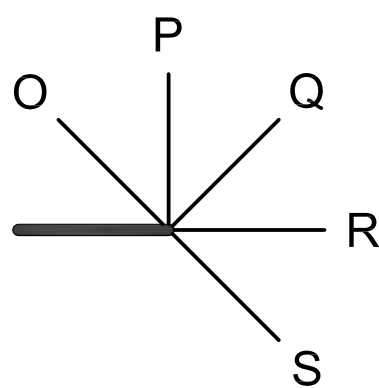
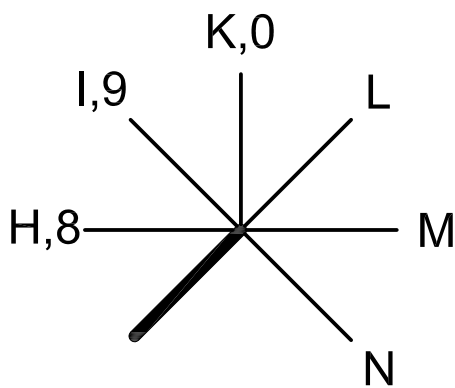
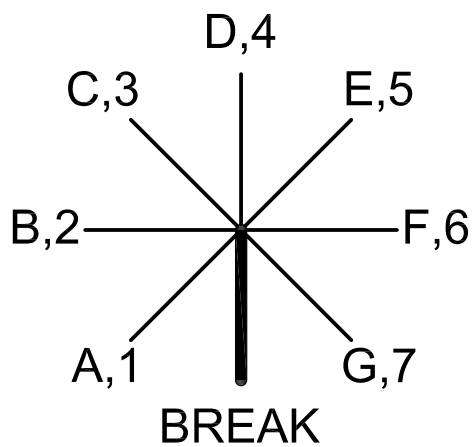


Fig 1. Shoulder exercises for home practice

Semaphore

Place one flag in the position of the dark bar.
Point the other flag to the desired symbol.



Communications (A-Z)

A ALPHA ..- 	B BRAVO -...- 	C CHARLIE -...- 	D DELTA -...- 	E ECHO .-... 	F FOXTROT -...- 	G GOLF -...- 	H HOTEL -...- 	I INDIA ..- 	J JULIET .-...-
K KILO -...- 	L LIMA -...- 	M MIKE -...- 	N NOVEMBER -...- 	O OSCAR -...- 	P PAPA -...- 	Q QUEBEC -...- 	R ROME -...- 	S SIERRA -...- 	T TANGO -...-
U UNIFORM -...- 	V VICTOR -...- 	W WHISKEY -...- 	X X-RAY -...- 	Y YANKEE -...- 	Z ZULU -...- 	BREAK 	NUMBERS 	CANCEL/ ANNUL 	ERROR