



School Of The Soldier

MARCHING CADENCE AND PACE

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Principles of Marching

- From a halt - always step off with the left foot.
 - Forward (104)
 - 1. Squad, forward. 2. Common time. 3. MARCH.
 - **S.S. 103. At the first command, the recruit will throw the weight of the body, on the right leg, without bending the left knee.**
 - **S.S. 104.** At the third command, he will smartly, but without a jerk, **carry straight forward the left foot twenty eight inches from the right, the sole near the ground, the ham extended, the toe a little depressed, and, as also the knee, slightly turned out;** he will, at the same time, throw the weight of the body forward, and plant flat the left foot, without shock, precisely at the distance where it finds itself from the right when the weight of the body is brought forward, the whole of which will now rest on the advanced foot. The recruit will next, in like manner, advance the right foot and plant it as above, the heel twenty-eight inches from the heel of the left foot, and thus continue to march without crossing the legs, or striking the one against the other, without turning the shoulders, and preserving always the face direct to the front.
 - Backward (256)
 - 1. Squad backward. 2. MARCH.
 - **S.S. 256.** At the second command, the recruits will **step off smartly with the left foot fourteen inches to the rear,** reckoning from heel to heel, and so with the feet in succession till the command halt, which will always be preceded by the caution squad. The men will halt at this command, and bring back the foot in front by the side of the other.

Principles of Marching

- Marching in place
 - Double quick step
 - 1. Double quick step. 2. MARCH.
 - The “Double Quick Step” is a cautionary command to march in place.
 - **S.S. 113.** At the first command the recruit will raise his hands to a level with his hips, the hands closed, the nails toward the body, the elbows to the rear.
 - **S.S. 114.** At the second command, he will raise to the front his left leg bent, in order to give to the knee the greatest elevation, the part of the leg between the knee and the instep vertical, the toe depressed; he will then replace his foot in its former position; with the right leg he will execute what has just been prescribed for the left, and the alternate movement of the legs will be continued until the command:
 - 1. Squad. 2. HALT.
 - **S.S. 115.** At the second command, the recruit will bring the foot which is raised by the side of the other, and dropping at the same time his hands by his side, will resume the position of the soldier without arms.
 - Mark time
 - 1. Mark time. 2. MARCH.
 - **S.S. 250.** At the second command, which will be given at the instant a foot is coming to the ground, the recruits will make a semblance of marching, by bringing the heels by the side of each other, and observing the cadence of the step, by raising each foot alternately without advancing.

Always Maintain Alignment of the Ranks

- Step off with the left foot
- Maintain the pace and cadence
- Keep shoulders square with the line
- Touch lightly the elbow toward the side of the guide
 - Do not extend the elbows to maintain contact with your comrades
- Yield to pressure coming from the side of the guide
 - Role of the guide is critical –
 - They must be competent – choose them wisely
- Resist pressure coming from the side opposite the guide
- No major, all-at-once, corrections!
 - The phrase “man in fault corrects himself by shortening or lengthening the step, by degrees, almost insensible” means make corrections in very small, barely noticeable, increments.
- Keep the head faced to the front
- Preserve the alignment by
 - regularity of the step,
 - the touch of the elbow, and
 - the maintenance of the shoulders in a square with the line of direction
- Double Quick still maintains rank and file alignment!!!!
 - E.g., Can't halt and quickly come to firing positions if the integrity of the ranks does not exist!

Always Maintain Alignment – Basis

School of the Soldier

- **S.S. 335.** At the command march, the rank will step off smartly with the left foot; the guide will take care to march straight to the front, keeping his shoulders always in a square with that line.
- **S.S. 336.** The instructor will observe, in marching to the front, that the men touch lightly the elbow toward the side of the guide; that they do not open out the left elbow, nor the right arm; that they yield to pressure coming from the side of the guide, and resist that coming from the opposite side; that they recover by insensible degrees, the slight touch of the elbow, if lost; that they maintain the head direct to the front, no matter on which side the guide may be; and if found before or behind the alignment, that the man in fault corrects himself by shortening or lengthening the step, by degrees, almost insensible.
- **S.S. 337.** The instructor will labor to cause recruits to comprehend that the alignment can only be preserved, in marching, by the regularity of the step, the touch of the elbow, and the maintenance of the shoulders in a square with the line of direction: that if, for example, the step of some be longer than that of others, or if some march faster than others, a separation of elbows, and a loss of the alignment, would be inevitable; that if (it being required that the head should be direct to the front) they do not strictly observe the touch of elbows, it would be impossible for an individual to judge whether he marches abreast with his neighbor, or not, and whether there be not an interval between them.
- **S.S. 338.** The impulsion of the quick step having a tendency to make men too easy and free in their movements, the instructor will be careful to regulate the cadence of this step, and to habituate them to preserve always the erectness of the body, and the due length of the pace.
- **S.S. 344.** The squad being at a march in quick time, the instructor will command:
 - 1. Double quick. 2. MARCH. 
- **S.S. 345.** At the command march, which will be given when either foot is coming to the ground, the squad will step off in double quick time. The men will endeavor to follow the principles laid down in the first part of this book, and to preserve the alignment. 

Regularity of Step, Part 1 = the Cadence

- Instructions on how to call Cadence – may appear to some as contradictory
 - **S.S. 107.** The instructor will indicate, from time to time, to the recruit, the cadence of the step by giving the command one at the instant of raising a foot, and two at the instant it ought to be planted, observing the cadence of ninety steps in a minute. This method will contribute greatly to impress upon the mind the two motions into which the step is naturally divided.
 - **S.S. 116.** The instructor placing himself seven or eight paces from, and facing the recruit, will indicate the cadence by the commands one and two, given alternately at the instant each foot should be brought to the ground, which at first will be in common time, but its rapidity will be gradually augmented.
- Physiology
 - If you observe another person walk, you notice that there is a brief moment when both feet are on the ground, the instant of raising one foot briefly overlaps the instant of planting the other.
- Not contradiction – just a different perspective
 - Instruction 107 is from the perspective of observing the movement of the same foot: one as it is raised, two as the same foot is planted.
 - Instruction 116 is from the perspective of observing the movement of two different feet: one as the heel of one foot strikes the ground, two as the heel of the other strikes the ground.
- Convention = ‘Left heel strike on One’
 - not explicitly called out in the instructions,
 - in practice we mark cadence by calling one the instant the *left* heel is planted on the ground and two the instant the *right* heel is planted on the ground.
- Unless explicitly stated otherwise, the soldier is to march at the quick time.

Regularity of Step, Part 2 = the Pace

- Always measured heel to heel
- Much shorter than typical length of step of modern man
 - Tall persons, typically our company leads, have to significantly shorten the length of their step
- Numbers to remember: 28, 33, 14
 - 28: Common Time and Quick Time
 - **S.S. 101.** The length of the direct step, or pace, in common time, will be twenty-eight inches, reckoning from heel to heel, and in swiftness, at the rate of ninety in a minute.
 - **S.S. 109.** The principles of the step in quick time are the same as for common time, but its swiftness is at the rate of one hundred and ten steps per minute.
 - 33: Double Quick
 - **S.S. 111.** The length of the double quick step is thirty-three inches, and its swiftness at the rate of one hundred and sixty-five steps per minute.
 - 14: Backward
 - **S.S. 256.** At the second command, the recruits will step off smartly with the left foot fourteen inches to the rear, reckoning from heel to heel, and so with the feet in succession till the command halt, which will always be preceded by the caution squad. The men will halt at this command, and bring back the foot in front by the side of the other.

Pace & Cadence (1 of 2)



- Direct Step, Common Time (S.S. 101)
 - Length: 28 inches
 - Rate: 90 steps in a minute = 1.5 steps per second
 - Basis:
 - S.S. 101. The length of the direct step, or pace, in common time, will be twenty-eight inches, reckoning from heel to heel, and in swiftness, at the rate of ninety in a minute.
- Direct Step, Quick Time (S.S. 109)
 - Length: twenty-eight inches
 - Rate: 110 steps per minute = ~1.8 steps per second
 - Basis:
 - S.S. 109. The principles of the step in quick time are the same as for common time, but its swiftness is at the rate of one hundred and ten steps per minute.
- Double Quick (S.S. 111 & S.S. 121)
 - Length: 33 inches
 - Rate: 165 steps per minute. (general) = 2.75 steps per second
 - Rate: 180 steps per minute. (urgent circumstances) = 3 steps per second
 - Basis:
 - S.S. 111. The length of the double quick step is thirty-three inches, and its swiftness at the rate of one hundred and sixty-five steps per minute.
 - S.S. 121. The double quick step may be executed with different degrees of swiftness. Under urgent circumstances the cadence of this step may be increased to one hundred and eighty per minute. At this rate a distance of four thousand yards would be passed over in about twenty-five minutes.

Pace & Cadence (2 of 2)

- The Run (S.S. 123 & S.S. 422)
 - Length: 33 inches
 - Rate: not specified beyond “consisting in a greater degree of swiftness” than the Double Quick
 - Basis:
 - S.S. 123. The principles are the same as for the double quick step, the only difference consisting in a greater degree of swiftness.
 - S.S. 422. The run, in actual service, will only be resorted to when it may be highly important to reach a given point with great promptitude.
- To March Backward (S.S. 256 & S.S. 257)
 - Length: 14 inches
 - Rate: 110 steps per minute.
 - Basis:
 - S.S. 256. At the second command, the recruits will step off smartly with the left foot fourteen inches to the rear, reckoning from heel to heel, and so with the feet in succession till the command halt, which will always be preceded by the caution squad. The men will halt at this command, and bring back the foot in front by the side of the other.
 - S.S. 257. This step will always be executed in quick time.
- Unless explicitly stated otherwise, the soldier is to march at the quick time.
 - Basis:
 - S.S. 333. The instructor will inform the recruits that at the command march, they will always move off in quick time, unless this command should be preceded by that of double quick.
- Route Step (S.C. 311)
 - Rate: 110 steps per minute.
 - Basis:
 - S.C. 311. The swiftness of the route step will be one hundred and ten steps in a minute; this swiftness will be habitually maintained in columns in route, when the roads and ground may permit.

Double Quick & the Run

- Troops were regularly drilled at double quick and the run
 - **S.C. 118.** When marching in double quick time, if a subdivision (in a column) has to change direction by turning, or has to form into line the men will quicken the pace to one hundred and eighty steps in a minute. The same swiftness of step will be observed under all circumstances where great rapidity of movement is required. But, as ranks of men cannot march any length of time at so swift a rate, without breaking or confusion, this acceleration will not be considered a prescribed exercise, and accordingly companies or battalions will only be habitually exercised in the double quick time of one hundred and sixty-five steps in the minute. (S.C. 118)
 - **S.C. 418.** The instructor will cause to be resumed the exercises in double quick time and the run, with arms and knapsacks.
 - **S.C. 420.** He will cause long marches to be executed in double quick time, both by the front and by the flank, and by constant practice will lead the men to pass over a distance of five miles in sixty minutes. The pieces will be carried on either shoulder, and sometimes at a trail.
 - **S.C. 421.** He will also exercise them in long marches at a run, the pieces carried at will; the men will be instructed to keep as united as possible, without however exacting much regularity, which is impracticable.
 - **S.C. 422.** The run, in actual service, will only be resorted to when it may be highly important to reach a given point with great promptitude.
- The formation
 - Double quick: maintain the integrity of the ranks
 - Run: keep united as possible without however exacting much regularity, which is impracticable

Step and Carry Pairings

- March to the front in quick time = only executed at shouldered arms
 - **S.S. 359.** As the march to the front in quick time should only be executed at shouldered arms, the instructor, in order not to fatigue the men too much, and also to prevent negligence in gait and position, will halt the squad from time to time, and cause arms to be ordered.
 - Keep in mind that marching in a column is “marching by the flank”, so other carries are allowed while marching in a column.
- Marching at double quick time = always carry their pieces on the right shoulder or at a trail.
 - **S.S. 360.** In marching at double quick time, the men will always carry their pieces on the right shoulder or at a trail. This rule is general.
 - **S.S. 361.** If the instructor shall wish the pieces carried at a trail he will give the command trail arms, before the command double quick. If, on the contrary, this command be not given, the men will shift their pieces to the right shoulder at the command double quick. In either case, at the command halt, the men will bring their pieces to the position of shoulder arms. This rule is general.
- The general rule
 - When marching at double quick time, the men will always carry their pieces on the right shoulder, unless they are explicitly instructed to carry them at the trail.

Question: Is every “Into Line” command carried at the right shoulder?

- I’ve heard comrades state that any command ending with “into line” means we automatically go to right shoulder shift. Does it?
 - I found no evidence to support that it does.
- Here’s what I did find:
 - March to the front (in battle line) in quick time is always at the shoulder
 - S.S. 359. As the march to the front in quick time should only be executed at shouldered arms, the instructor, in order not to fatigue the men too much, and also to prevent negligence in gait and position, will halt the squad from time to time, and cause arms to be ordered.
 - Any march in Double Quick Time is always at the Right Shoulder Shift unless explicitly told to carry at Trail Arms.
 - S.S. 360. In marching at double quick time, the men will always carry their pieces on the right shoulder or at a trail. This rule is general.
 - S.S. 361. If the instructor shall wish the pieces carried at a trail he will give the command trail arms, before the command double quick. If, on the contrary, this command be not given, the men will shift their pieces to the right shoulder at the command double quick. In either case, at the command halt, the men will bring their pieces to the position of shouldered arms. This rule is general.

Question: Then, is every “Into Line” executed at the Double Quick?

- Given that any march in Double Quick Time is always at the Right Shoulder Shift, the real question becomes: Is every “Into line” executed at the Double Quick?
 - This would be similar to the Base Ball “rule” that the “tie goes to the runner”.
 - i.e., there is no such rule.
 - The Rule is the runner ‘must arrive at the bag before the ball does.’
 - Are reenactors doing a similar thing with “into line” commands? i.e.
 - If all “Into Line” maneuvers must be executed at the double quick.
 - And when at the Double Quick, the piece is carried at Right Shoulder Shift (unless explicitly instructed to carry at the Trail)
 - Then the Carry for “into Line” would be “Right Shoulder Shift” unless instructed to carry at the Trail
 - Maybe
- Note that when the unit comes on line, they are now marching to the front, so that carry is at the Shoulder

Answer: The carry for “Into Line” commands – depends on the command.

- Every “Into line” command is NOT executed at the Double Quick.
 - Found no evidence in Schools of the Soldier, Company, or Battalion of a general rule
 - **S.C. 118.** When marching in double quick time, if a subdivision (in a column) has to change direction by *turning, or has to form into line*, the men will quicken the pace to one hundred and eighty steps in a minute. The same swiftness of step will be observed under all circumstances where great rapidity of movement is required. ...
 - **S.C. 118** the prescribed cadence for forming into line is conditional on already being “... marching in double quick time”
 - Because the soldiers are already marching at the Double Quick, the soldiers are already at Right Shoulder Shift carry
 - 1. *Left (or right) turn.* 2. *MARCH.* => **Yes**
 - **S.S. 415** At the command *march*, to be pronounced at the instant the rank ought to turn, the guide will face to the left (or right) in marching, and move forward in the new direction without slackening or quickening the cadence, and without shortening or lengthening the step. The whole rank will promptly conform itself to the new direction: to effect which, each man will advance the shoulder opposite to the guide, take the double quick step, to carry himself in the new direction, turn the head and eyes to the side of the guide, and retake the touch of the elbow on that side, in placing himself on the alignment of the guide, from whom he will take the step, and then resume the direct position of the head. Each man will thus arrive successively on the alignment.
 - 1. *On the right, by file into line.* 2. *MARCH.* => Not Sure
 - **S.C. 151** does not mention the step or cadence used.
 - 1. *By company, into line.* 2. *MARCH.* => **Yes**
 - **S.C. 156.** At the command *march*, the covering sergeant will continue to march straightforward; the men will advance the right shoulder take the double quick step, and move into line by the shortest route, taking care to undouble the files, and to come on the line one after the other.
 - 1. *Left into line, wheel.* 2. *MARCH.* => Not sure.
 - **S.C. 244** does not mention the step or cadence used.
 - 1. *Right into line, wheel.* 2. *MARCH.* => Not sure.
 - **S.C. 253** does not mention the step or cadence used.
 - 1. *Two files into line.* 2. *MARCH.* => *Not sure.*
 - **S.C. 300** does not mention the step or cadence used.
 - 1. *Four or six file into line.* 2. *MARCH.* => *Not sure.*
 - **S.C. 304** does not mention the step or cadence used.
 - 1. *On the right into line.* 2. *Guide right. ... 1. Right Turn.* 2. *MARCH.* => **Yes, because executing a Turn.**
 - **S.C. 353** does not mention the step or cadence used.

Answer: The carry for “Into Line” commands – depends on the command.

- Best clue found in School of the Battalion 
 - 1. *By the rear of column left (or right) into line, wheel.* 2. *MARCH (or double quick— MARCH).*
 - S.B. 493 & 494 The parenthetical indicates the use of double quick is not automatic.
- Therefore
 - Since all “Into Line” maneuvers are not executed at the double quick.
 - Then the Carry for “into Line” maneuvers depends upon the command given.
- When the unit comes on line, they are now marching to the front, so the carry when on line is at the Shoulder
- Anyone have a better or a counter reference? 

To March Backward

- **S.S. 255.** The instructor, wishing the squad to march backward, will command:
 - 1. *Squad backward.* 2. MARCH.
- **S.S. 256.** At the second command, the recruits will step off smartly with the left foot fourteen inches to the rear, reckoning from heel to heel, and so with the feet in succession till the command halt, which will always be preceded by the caution squad. The men will halt at this command, and bring back the foot in front by the side of the other.
- **S.S. 257.** This step will always be executed in quick time.
- **S.S. 258.** The instructor will be watchful that the recruits march straight to the rear, and that the erect position of the body and the piece be not deranged.

The Halt

1. Squad. 2. HALT.

- **S.S. 106.** At the second command, which will be given at the instant when either foot is coming to the ground, the foot in the rear will be brought up, and planted by the side of the other, without shock.
- The HALT is a sudden stop.
 - As described, the command is given towards the tail end of a stride: “given at the instant when either foot is coming to the ground”.
 - Forward motion ceases immediately.
 - The rear foot is placed beside the other
 - No extra steps!
- How best to execute this in practice?
 - The men must be marching in cadence ;-)
 - Give the command immediately after one foot strikes the ground
 - Stop when the next foot strikes the ground

Distance between the ranks

- Typically
 - **S.S. 17.** The distance from one rank to another will be **thirteen inches**, measured from the breasts of the rear-rank men to the backs or knapsacks of the front-rank men.
 - To ensure the rear rank is aligned properly, all soldiers in the front rank must be equipped the same
 - Either they all carry knapsacks/blanket rolls, or they all go without
- When marching in two ranks,
 - The distance will expand and contract when changing the carry to and from right shoulder shift (respectively)
 - The distance expands to 16 inches when marching in quick time
 - The distance expands to 26 inches when marching in double quick time
 - The distance contracts to 13 inches when returning to the shoulder
 - The rear rank makes the adjustments
 - **S.C. 135.** When the pieces are carried on the right shoulder, in **quick time**, the distance between the ranks will be **sixteen inches**. Whenever, therefore, the instructor brings the company from a shoulder to this position, the rear-rank must shorten a little the first steps in order to gain the prescribed distance, and will lengthen the steps, on the contrary, in order to close up when the pieces are again brought to a shoulder. In marching in **double quick time**, the distance between the ranks will be **twenty-six inches**, and the pieces will be carried habitually on the right shoulder.
- When Halted
 - **S.C. 136.** Whenever a company is halted, the men will bring their pieces at once to a shoulder at the command *halt*. The rear-rank will close to its proper distance. *These rules are general.*

Double Quick Time - recap

- The command:
 - 1. Double quick. 2. MARCH.
- Still maintain rank alignment!!!!
 - This is **NOT** a race
 - This is best described as a trot or a light jog
 - Swift but under control
- Length of step: 33 inches
- Rate:
 - 165 steps per minute. (general) = 2.75 steps per second
 - 180 steps per minute. (urgent circumstances) = 3 steps per second
- Carry: always on the right shoulder or at a trail.
 - Right shoulder shift is default,
 - Trail by command only
- Required cadence for two commands:
 - 1. *By company, into line.* 2. MARCH.
 - 1. *Left (or right) turn.* 2. MARCH.
 - For all soldiers except the pivot flank
- Must be explicitly called for all other commands
- When marching in two ranks, AND the carry is right shoulder shift, the rear rank must to expand the distance between ranks:
 - If marching in quick time, the distance between the ranks will be **sixteen inches**.
 - If marching in double quick time, the distance between the ranks will be **twenty-six inches**.