

[Rev. 274-135-3]

BASIC FIELD MANUAL

CONVENTIONAL SIGNS, MILITARY SYMBOLS, AND ABBREVIATIONS

CHANGES |
No. 3 |

WAR DEPARTMENT
Washington 25, D. C., 28 February 1945

FM 21-30, 15 October 1943, is changed as follows:

Part IV (Added) Photo Interpretation Symbols




Chapter 11 List of Photo Interpretation Symbols





31. GENERAL. The symbols listed in this chapter are prescribed for use in photographic interpretations. They have been approved for joint use of the Army and Navy. These symbols are used in the annotation of aerial photographs and the preparation of overlays, reports, terrain models, and sketches from aerial photographic interpretation information.

32. ADDITIONAL SYMBOLS. When symbols listed herein or combinations thereof do not give complete information, supplementary notations should be added. In special cases where no symbols can be found that apply, improvised symbols may be used provided they are explained in the legend and do not conflict with authorized symbols.




33. SIZE OF SYMBOLS. The size of photo interpretation symbols shall be consistent with the scale of the finished material.

g. Infantry weapons.

Machine gun, heavy... 
 Machine gun, light... 
 Machine gun, field of fire... 




Mortar (annotate size)... 
 Mortar, barrage (annotate size)... 
 Rocket projector, single (annotate size)... 
 Rocket projector, multiple (annotate size)... 


















h. Vehicles.


Vehicle, animal drawn... 
 Vehicle, armored... 
 Vehicle, motor... 

36. EMPLACEMENTS.

If the type of material utilized in the construction of the emplacement can be determined, the appropriate "MATERIAL INDEX" will be added beneath the symbol.

Emplacement, unoccupied... 
 Emplacement, covered... 
 Example—4-gun, 240-mm. heavy coast defense battery in covered concrete emplacements... 













Fire control center... 
 Fire control, radar... 
 Fire control, visual... 
 Foxhole (if in quantity, outline area and annotate: Foxholes)... 
 Observation post... 
 Observation post, artillery... 
 Observation tower... 
 Pillbox (axis of gun indicates direction of fire. Show size of gun if known.)... 
 Bunker... 
 Casemate or blockhouse... 
 Sniper post... 
 Personnel shelter, above ground... 
 Personnel shelter, below ground... 
 Strong point... 
 Trench, communication... 
 Trench (with firing bays)... 
 Trench, fire... 








Weapons pit (infantry)... 

37. OBSTACLES.





If the type of material utilized in the construction of the obstacle can be determined, the appropriate "MATERIAL INDEX" will be added beneath the symbol.

a. Obstacles, land.

Antitank barrier... 
 Antitank ditch... 
 Antitank ditch, covered... 
 Barrage balloon... 
 Demolition charge... 
 Obstacles, fixed... 
 Obstacles, movable... 
 Stakes (plot position)... 
 Road block, demolition... 
 Road block, partial... 
 Road block, total... 
 Wire, broad area (base of symbol indicates location of first strand. Depth of zone, in feet, is indicated by numerals)... 

Wire, concertina, single... 
 Wire, concertina, double... 
 Wire, single-fence... 
 Wire, double-fence... 
 Mines... 
 Mine field gap... 
 Mined area, land... 

b. Obstacles, underwater.

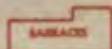
Mined area, water... 
 Obstacle, large fixed... 
 Tetrahedron, ramp, or hedgehog, fixed... 
 Tetrahedron, ramp, or hedgehog, movable... 
 Stakes, piles, or rails (plotted by position)... 
 Tetrahedron, ramp or hedgehog, fixed (in line—numeral indicates number of tetrahedra, etc., between precisely located points)... 
 Tetrahedron, ramp or hedgehog, movable (in multiple rows, show by line)... 

When used with wire or mines, use proper symbols, use "MATERIAL INDEX" where known.....



38. MILITARY AREAS.

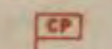
Barracks area.....



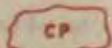
Bivouac area.....



Command post.....



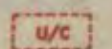
Command post area.....



Military occupation.....



New construction.....



Park, armored (outline area, indicate type where possible, and show numerically the number of vehicles).....



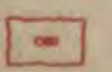
Park, engineer equipment (outline area and indicate type where possible).....



Park, motor (outline area, indicate type where possible, and show numerically the number of vehicles).....



Park, ordnance (outline area, indicate type where possible, and show numerically the number of vehicles).....



Stores, area (area of stores to be included in a solid ring).....



Ammunition.....



Buried.....



Coal.....



Engineer.....



Chemical.....



Loose.....



Lumber.....



Oil or gas.....



Water.....



Tent, area.....



Tent.....



39. TERRAIN FEATURES. a. Installations (cultural).

Blast wall (line conforms to shape of installation protected).....



Retaining wall.....



Building.....



Building, buried.....



Building, dug-in.....



Building, revetted.....



Building, under construction.....



Cable.....



Cable, buried.....



Cemetery.....



Church.....



Excavation.....



Hospital.....



Pipe line, buried.....



Pipe line, overhead.....



Pipe line, surface.....



Railroad, double-track.....



Railroad, electrified.....



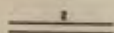
Railroad, narrow gauge.....



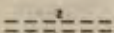
Railroad, single-track.....



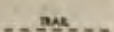
Road, primary (show number of lanes in figures. Minimum width of 1 lane is 8 feet).....



Road, secondary (show number of lanes in figures. Minimum width of 1 lane is 8 feet).....



Path or trail.....



Bridge, indicate width in feet and construction material by "MATERIAL INDEX".....



Bridge, out.....



Bridge, ponton.....



For engineer classification of roads and bridges, see paragraphs 25a, b, and c, pp. 47 through 49.

School.....



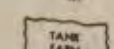
Stone fence.....



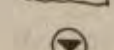
Tank, buried.....



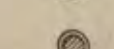
Tank farm.....



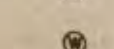
Tank, fuel.....



Tank, gasometer.....



Tank, water.....



Tower, unspecified or obstruction . . .



Tower, water



Underground entrance



Well derrick



Windmill



Canal



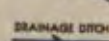
Culvert



Dam



Drainage ditch



Flood gate



Lock



Lock, double



b. Topography.

Cliff



Cliff, rocky



Slope



Ridge line



Sand dunes



Cut



Fill



Lake



Lake, dry



River or stream



Ford



Direction of flow



Stream, bed



Stream, intermittent



Falls or rapids



Well



Spring



Tidal flats



Inundated (overflowed land)



c. Vegetation.

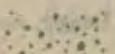
Area of specific vegetative type (on photographs)



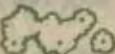
Brush



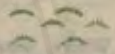
Coniferous forest



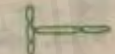
Deciduous forest



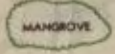
Grassland



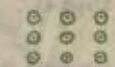
Hedges



Mangrove



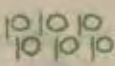
Orchard or plantation



Palms



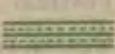
Rain forest or jungle



Rice field



Sugarcane



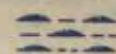
Stump land



Swamp forest



Swamp or marsh



Tree



NOTE.—Areas containing the above, or other, types of vegetation should be outlined and annotated with the type indicated.

40. ELECTRONICS.

Direction finder



Power station



Power transmission line (obstruction)



Power transmission line (not obstruction)



Radar



Radio navigational aid



Radio station



Radio transmitter





Searchlight



Searchlight, radar-controlled






Sound locator.....	
Tower, control.....	
Tower, light.....	
Tower, radio.....	
Tower, signal.....	
Telephone or telegraph line.....	
Transformer station.....	
Weather station.....	




41. NAVAL AND HYDROGRAPHY.




a. Naval.

ANCHORAGES:







Ship.....	
Ship, emergency.....	
Ship with complete facilities.....	



BUOYS AND LIGHTS:

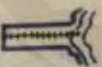


Buoy, bell, etc.....	
Buoy, lighted.....	
Buoy, unspecified.....	

Lightship.....	
Light, unspecified.....	
Crane.....	


DANGERS:


Danger, area.....	
Rock, awash.....	
Rock, sunk.....	
Wreck, awash.....	
Wreck, sunk.....	
Dredge.....	

Drydock.....	
Drydock, floating.....	

Marine railway.....	
Net, submarine.....	
Net, torpedo.....	

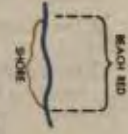
VESSELS:


Merchant (indicate type by "JMST" code designation. See PI Handbook).....	
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Naval (indicate type by standard U. S. Navy designation. See PI handbook)..... 

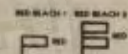
b. Beach studies and depth determination.

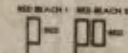
BEACHES:

Location and extent..... 


Gradient (slope)..... 


Center..... 


Left flank (from sea)..... 


Right flank (from sea)..... 


BEACH MATERIAL:


Block or boulder..... 


Gravel or cobble..... 


Kelp or seaweed..... 

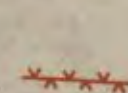
Mud or silt..... 

Pebble..... 

Bed rock..... 


Sand..... 

Shingle..... 

Sea wall (see also "OBSTACLES, UNDER-WATER")..... 

c. Offshore.

BOTTOM MATERIAL (use same designations as for "BEACH MATERIAL"):















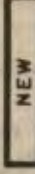
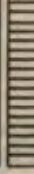



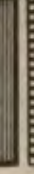

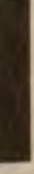
Block or boulder..... 

Shingle..... 

Gravel or cobble . . .		Flood	
Kelp or seaweed . . .		General	
Mud		d. Wave and surf symbols for depth determination.	
Pebble		Wave length	L
Rock		Distance of outermost breakers from datum line	L _b
Sand		Wave period	P
REEFS, BARS, AND SHOALS:		Wave velocity	C
Edge of coral reef . . .		Wave height (trough to crest)	H
Edge of rock reef . . .		Angle of wave crest with bottom contours	α (angle)
Edge of sand bar . . .		Angle of breakers with beach	D
Sand bar, exposed (above datum) . . .		Velocity of longshore current in knots	C _L
Sand bar, unexposed (below datum) . . .		Subscript "o" reflects to values in deep water	o Example - C _o
Coral head, area . . .		High water datum	
Coral head, isolated . . .		Low water datum	
TIDES AND CURRENTS:		Soundings in fathoms	6
Ebb, KN—Speed of current in knots . . .		Soundings in feet	6
		Contours, hydrographic	3

Critical line special purposes		Seaplane base, complete facilities	
WAVE AND SURF CONDITIONS:		Seaplane base, refueling facilities	
Breakers		Seaplane anchorage, no facilities	
Surf line		Seaplane, ramp	
NOTE. —Additional symbols and abbreviations for hydrographic designations should conform to those published in H. O. No. 8.			
42. AIR FIELDS AND SEAPLANE BASES.			
Aircraft		Single bomb certain, with crater	
Aircraft, damaged		Single bomb certain, no crater	
Aircraft, dummy		Single bomb probable, no crater	
Aircraft, revetment		One or more bombs certain in vicinity of arrowhead	
Aircraft, revetment under construction		One or more bombs probable in vicinity of arrowhead	
Aircraft, shelter		Bomb burst, area of fragmentation	
Airfield, complete facilities		Fire location	
Airfield, refueling facilities		Cloud obscured	
Airfield, no facilities		Smoke obscured	
Landing ground, no facilities		Line of flight	
		Nadir point	

14 **b. Damage assessment : For overlays.**

Agent	Structural	Good Cover Only Superficial	Roof Disturbance	Medium and Poor Cover and 1st Phase
H. E. alone.....				
H. E. plus fire.....				
Fire alone.....				
Doubtful.....				
Prior damage from earlier raids.....				
c. Repair studies : For overlays.				
Construction completed.....				
Construction in progress.....				
Least activity.....				
				
				
				
				

Damage not repaired.....

Damage repaired.....

New buildings.....

Superficial repairs.....

Structural repairs.....

Repair of damaged areas.....

New buildings.....

Damage cleared (possible preparation for repairs).....

Site cleared or no action.....

d. Damage assessment : For photographs (color index).

NOTE.—Symbols are similar to those used on overlays with differentiation by color.

H. E. alone.....	GREEN
H. E. plus fire.....	PURPLE
Fire alone.....	RED
Doubtful.....	YELLOW

e. Repair studies : For photographs (color index).

NOTE.—Symbols: Outline for clearance completed, cross hatch for repairs in progress, solid for repairs completed.

To structural damage.....	PURPLE
To superficial damage.....	GREEN
To roof disturbance.....	YELLOW
First aid repairs.....	BLUE
New buildings.....	RED
Condition of area or site (clearance or no action)	BLACK

[AG 500.7 (14 Feb 45)]

BY ORDER OF THE SECRETARY OF WAR:

OFFICIAL:
 J. A. ULIO
Major General
The Adjutant General

G. C. MARSHALL
Chief of Staff

WELLS
WELLS
WELLS
WELLS
WELLS

PURPLE
GREEN
YELLOW
WHITE
RED
BLACK

U. S. MAIL

