# Amphibious Ships and Landing Craft Data Book



U.S. Marine Corps DEPARTMENT OF THE NAVY Headquarters United States Marine Corps Washington, DC 20380-0001

**1 October 2000** 

FOREWORD

#### 1. PURPOSE

Marine Corps Reference Paper (MCRP) 3-31B, Amphibious Ships and Landing Craft Data Book, is for use in planning where generalized capabilities and measurements are required. In planning for operations where exact capabilities and figures are required, the individual ship's loading characteristics pamphlet (SLCP) must be consulted.

#### 2. SCOPE

The information contained in this MCRP was obtained from the individual SLCPs and from the Naval Sea Systems Command. The data is based on class averages. No broken stowage factors have been applied to square footage in embarked landing craft.

#### 3. SUPPRESSION

None.

### 4. CHANGES

Recommendations for improvements to this publication are encouraged from commands as well as from individuals. Forward suggestions using the User Suggestion Form format to:

Commanding General Doctrine Division (C 42) Marine Corps Combat Development Command 2042 Broadway Street Suite 210 Quantico, VA 22134-5021

### 5. CERTIFICATION

Reviewed and approved this date.

### BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

Major General, U.S. Marine Corps Deputy Commander for Warfighting Marine Corps Combat Development Command Quantico, Virginia

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**User Suggestion Form** 

From:

*To:* Commanding Officer, Doctrine Division (C 42), Marine Corps Combat Development Command, 2042 Broadway Street Suite 210, Quantico, Virginia 22134-5021

Subj: RECOMMENDATIONS CONCERNING MCRP 3-31B, AMPHIBIOUS SHIPS AND LANDING CRAFT DATA BOOK

1. In accordance with the foreword to MCRP 3-31B, which invites individuals to submit suggestions concerning this MCRP directly to the above addressee, the following unclassified recommendation is forwarded.

Page Article/Paragraph No. Line No.

Figure/Table No.

Nature of Change:

G Add G Delete G Change G Correct

2. Proposed new verbatim text: (Verbatim, double-spaced; continue on additional pages as necessary.)

3. Justification/source: (Need not be double-spaced.)

Note: Only one recommendation per page.

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# **Record of Changes**

Change No.	Date of Change	Date of Entry	Organization	Signature

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# Amphibious Ships and Landing Craft Data Book

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USS Mount Whitney (LCC-20) Pictured

#### Mission

The assigned mission of the amphibious command ship (LCC) is to function as the command ship for a Joint Task Force (JTF) as the C4I (command, control, communications, computers and intelligence) platform, or for; a Naval Component Commander; numbered Fleet Commader; commander, amphibious task force (CATF); Marine Expeditionary Force (MEF); or commander, joint task force (CJTF).

General Comments

This ship is designed primarily to fulfill command and control requirements for surface, subsurface, and air units engaged in amphibious assaults.

The USS Blue Ridge (LCC-19) is distinctive in appearance. It is built on what is essentially the hull of the USS Iwo Jima class amphibious assault ship. The ship can communicate in frequency ranges from high frequency to super high frequency, including two satellite systems for high speed/high volume communication links. the various internal command areas are highly automated to monitor and process information regarding the progress of an amphibious operation. This is the only class of ship designed from their hull up to support the command and control needs of the CATF, CLF, and tactical air control center.

# 

# **General Information**

Length Overall	620'
Beam	180'
Displacement Light/Full (Tons)	16,100/18,646
Draft (Full Load)	29'
Main Engines (Geared Turbine)	1
Boilers	2
Shafts	1
Shaft Horsepower	22,000
Speed (Knots)	23
Range at 16 Knots (nmi)	13,000
Staff Accommodations	217
Crew Accommodations	774
Ship's Chaplain	Yes

# Landing Force Lift General Information

<b>Officer</b> Accommodations	56
Enlisted Accommodations	
(E-7/E-6 and Below)	42/111
Vehicle Square	3,015
Cargo Cube	2,175
Helicopter Landing Spots	1
JP-5 (Gallons)	123,510

# Command and Control Systems

Combat Information Center (CIC)	Yes
Integrated Tactical Amphibious Warfare Data System (ITAWDS)	No
Ship Signals Exploitation Space (SSES)	Yes
Flag Plot	Yes
Landing Force Operations Center (LFOC)	Yes
Joint Intelligence Center (JIC)	Yes
Support Arms Coordination	
Center (SACC)	Yes
Tactical-Logistical Group (TACLOG)	No
Helicopter Logistics Support Group (HLSG	Yes
Tactical Air Control Center (TACC)	Yes
Helicopter Direction Center (HDC)	Yes
Helicopter Coordination Section (HCS)	Yes

# Ship's Organic Craft

LCPL	2
Utility Boat	1

# Ship Weapons

Close in Weapon System (CIWS),	
MK-16 20mm	2
MK-36 Chaff Rocket (SRBOC) Launcher	4

# Ships in Class

Hull Number	Ship's Name	Home Port
LCC-19	USS Blue Ridge	Yokosuka, Japan
LCC-20	<b>USS Mount Whitney</b>	Norfolk, VA

# Amphibious Assault Ship (General Purpose) USS Tarawa (LHA-1)Class



USS Nassau (LHA-4) Pictured

Mission

The assigned mission of the amphibious assault ship (general purpose) (LHA) is to embark, deploy, and land elements of a Marine landing force in an amphibious assault by helicopters, landing craft, amphibious vehicles and by combinations of these methods.

**General Comments** 

The LHA combines the major characteristics of the amphibious cargo ship (LKA) and the amphibious assault ship (LPH) into a single hull. These features include a full length flight deck, a landing craft docking well (well deck), large storage areas for vehicles and cargo, and troop berthing for a reinforced battalion. An ITAWDS provides computerized support in control of helicopters, aircraft, shipboard weapons, sensors, navigation, landing craft, and electronic warfare.

The flag spaces are designed to support the staff of the embarked Navy organization (amphibious squadron (PHIBRON), or an amphibious group (PHIBGRU) staff) and the Marine landing force staff (Marine Expeditionary Unit (MEU), Marine Expeditionary Brigade (MEB), or Marine Expeditionary Force (MEF)). The design of the LHA provides an optimum operational environment for ship's company, embarked staffs, troops, and support personnel prior to, during, and after an amphibious operation.

#### LHA

Yes

#### **General Information**

Length Overall	820'
Beam	106'
Displacement Light/Full (Tons)	33,536/39,967
Draft (Full Load)	
26'	
Main Engines (Geared Turbine)	2
Boilers	2
Shafts	2
Shaft Horsepower	70,000
Speed (Knots)	24
Range at 20 Knots (nmi)	10,000
Bow Thruster	Yes
Staff Accommodations	87
Crew Accommodations	956
Ship's Chaplain	Yes

#### Landing Force Lift General Information

Officer Accommodations172Enlisted Accommodations(E-7/E-6 and Below)59/1,672Surge Accommodations0Vehicle Square28,700Cargo Cube208,000Helicopter Landing Spots9Operational CH-46 Equivalents43JP-5 (Gallons)407,600MOGAS (Gallons)546LFORMYes

#### **Command and Control Systems**

Combat Information Center	Yes
Integrated Tactical Amphibious	Yes
Warfare Data System	
Ship Signals Exploitation space	Yes
Flag Plot	Yes
Landing Force Operations Center	Yes
Joint Intelligence Center	Yes
Supporting Arms Coordination	Yes
Center	
Tactical-Logistical Group	Yes
Helicopter Logistics Support Group	Yes
Tactical Air Control Center	Yes
Helicopter Direction Center	

Helicopter Coordination Section

#### Medical

Operating Rooms	4
Post Operative Recovery/Intensive Can	re (Beds) 17
Isolation Ward (Beds)	4
Primary Care ward (Beds)	48
Casualty Overflow (Beds)	300
Ship's Doctor	Yes
Ship's Dentist	
Yes	

#### Well Deck

The landing craft numbers listed below are the maximum number of each type of craft that can be stowed in the well deck exclusive of any other craft. Combinations of these craft may be stowed in the well deck.

Length	(To Island/Overall)	107'7"/249'8"
Width	76'	
Height	26'8"	
LCAC	1	
LCU	4	

#### **Cargo Handling Equipment**

Forklifts (Electric/4-Ton)	13
Forklifts (Diesel/6-Ton)	8
Forklifts (Rough Terrain 10,000)	2
Aircraft Tow Tractors (4¼-Ton)	6
Aircraft Spotting Dollies (6-Ton)	3
Aircraft Elevators (40-Ton Aft/	2
20-Ton Portside)	
Longitudinal Pallet Conveyors	1
Monorails (2 Hooks Each With	3
3-Ton Capacity)	

#### Ship's Organic Craft

LCPL 2

#### Ship's Weapons

CIWS, MK-16 20mm	1
Rolling Airframe Missile System	2
MK-36 Chaff Rocket (SRBOC) Launcher	4

Yes

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Ship's Name	Home Port
USS Tarawa	San Diego, CA
USS Saipan	Norfolk, VA
USS Belleau Wood	San Diego, CA
USS Nassau	Norfolk, VA
USS Peleliu	SanDiego, CA
	USS Tarawa USS Saipan USS Belleau Wood USS Nassau

# Amphibious Assault Ship (Multipurpose) USS Wasp (LHD-1)Class



USS Essex (LHD-2) Pictured

### Mission

The assigned mission of the amphibious assault ship (multipurpose) (LHD) is to Embark, deploy, and land elements of a Marine landing force in an amphibious assault by helicopters, landing craft, amphibious vehicles and by combinations of these methods. The LHD is assigned a secondary mission of sea control and power projection in which additional fixedwing vertical/short takeoff and landing (V/STOL aircraft and helicopters are deployed.

# General Comments

The LHD incorporates the original design features of the LHA. The ship can embark a large segment of a MEU with its equipment and supplies. The flag spaces are designed to support the staff of the embarked Navy organization (amphibious squadron (PHIBRON), or an amphibious group (PHIBGRU) staff) and the Marine landing force staff (Marine Expeditionary Unit (MEU), Marine Expeditionary Brigade (MEB), or Marine Expeditionary Force (MEF)).

The aviation facilities are capable of supporting a composite helicopter squadron or an AV-8B V/STOL squadron or combination of the two. The flight deck can accommodate 20 AV-8B and 4 to 6 SH-60B (LAMPS III), thus enabling the commander to control the sea while projecting power. An expanded and combined flag data display uses the latest in technology to enhance the commander's ability to control air, land, and sea assets

#### LHD

# **General Information**

Length Overall	844'
Beam 107'	
Displacement Light/Full	26,840/40,532
Draft (Full Load)	26'6"
Main Engines	2
Boilers	2
Shafts	2
Shaft Horsepower	70,000
Speed (Knots)	22
Range at 20 Knots (nmi)	Classified
Bow Thruster	No
Staff Accommodations	35
Crew Accommodations	1,231
Ship's Chaplain Yes	

### Landing Force Lift General Information

Officer Accommodations	173
Enlisted Accommodations	
(E-7/E-6 and Below)	64/1,656
Surge Accommodations	
(Officer/E-7/E-6 and Below)	19/6/186
Vehicle Square	24,012
Cargo Cube	145,000
Helicopter Landing Spots	9
<b>Operational CH-46 Equivalents</b>	42
JP-5 (Gallons)	484,000
MOGAS (Gallons)	546
LFORM	Yes

# **Command and Control Systems**

Combat Information Center	Yes
Integrated Tactical Amphibious Warfare	
Data System	Yes
Ship Signals Exploitation Space	Yes
Flag Plot	Yes
Landing Force Operations Center	Yes
Joint Intelligence Center	Yes
Supporting Arms Coordination Center	Yes
Tactical-Logistical Group	Yes
Helicopter Logistics Support Group	Yes
Tactical Air Control Center	Yes
Helicopter Direction Center	Yes
Helicopter Coordination Section	Yes

#### Medical

Operating Rooms	6
Post Operative Recovery/Intensive Care	
(Beds)	18
Isolation Ward (Beds)	6
Primary Care Ward (Beds)	36
Casualty Overflow (Beds)	536
Ship's Doctor	Yes
Ship's Dentist	Yes

#### Well Deck

The landing craft numbers listed below are the maximum number of each type of craft that can be stowed in the well deck exclusive of any other craft. Combinations of these craft may be stowed in the well deck.

Length (Overall)	322'
Width	50'
Height	28'
LCAC	3
LCU	2

# Cargo Handling Equipment

Forklifts (Electric [EX] [2-Ton])	14
Forklifts (Diesel) (3-Ton)	25
Forklifts (Rough Terrain 10,000)	2
Aircraft Tow Tractors	5
Spotting Dollies	4
Aircraft Elevators (Port/Stbd 37½-Ton)	2
AACC Crash Crane (35-Ton Max Cap)	1
Monorail Trains (1½-Ton)	5
Cargo Elevator (6-Ton)	6
Pallet Conveyors (1/2-Ton/300 Pallets/Hou	ır 2

# Ship's Organic Craft

LCPL	<u>_4</u>	1
7 Meter RIB		1

# Ship Weapons

CIWS, MK-15 MOD 13, 3-Gun	3
NSSMS	2
.50 cal. Machine Gun M-2HB	8

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#### MCRP 3-31B

# Ships in Class

Hull Number	Ship's Name	Home Port	<b>Projected Delivery</b>
LHD-1	USS Wasp	Norfolk, VA	
LHD-2	USS Essex	Sasebo, Japan	
LHD-3	USS Kearsarge	Norfolk, VA	
LHD-4	USS Boxer	San Diego, CA	
LHD-5	USS Bataan	Norfolk, VA	
LHD-6	USS Bon Homme Richard	San Diego, CA	
LHD-7	USS Iwo Jima	Norfolk, VA	04/01
LHD-8	TBD	TBD	06/06

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Amphibious Transport Dock USS Austin (LPD-4)Class



USS Trenton (LPD-14) Pictured

#### Mission

The assigned mission of the LPD is to transport and land troops and their essential equipment and supplies by means of embarked landing craft or amphibious vehicles augmented by helicopter lift in an amphibious assault.

#### **General Comments**

The LPD is a general purpose amphibious ship with substantial lift capacities for troops, vehicles, landing craft, cargo, and bulk fuel. It combines features of the LKA, the LPH, the LSD, and the LST. The LPD is capable of ballasting to permit loading and launching of landing craft and assault amphibious vehicles. Vehicles can move about the various decks by a series of power operated ramps. The well deck can

accommodate all types of landing craft currently in the amphibious force inventory. A limited number of helicopters may be transported on the flight deck as the LPD serves as a helicopter platform for landing embarked troops and their supplies. It also serves as a refueling station for helicopters of the landing force. Troops, vehicles, and equipment can be loaded/offloaded by helicopter and landing craft simultaneously. Several of the LPD's are flag configured for MEU and PHIBRON size staffs. \_\_\_\_\_

#### LPD 4

Length Overall		570'
Beam		84'
Displacement Light/		9,128/
Full (Tons)		16,905
Draft		23'
Main Engines		2
Boilers		2
Shafts		2
Shaft Horsepower		24,000
Speed (Knots)		
21		
Range at 20 Knots (nmi	)	7,700
Bow Thruster		No
Staff Accommodations		
(Flag Configured Only)		60
Crew Accommodations		<i>492</i>
Ship's Chaplain		Yes

### Landing Force Lift General Information

<b>Officer</b> Accommodations	68
Enlisted Accommodations	
(E-7/E-6 and Below)	21/560
Surge Accommodations	
(E-6 and Below)	176
Vehicle Square	14,000
Cargo Cube	51,000
Helicopter Landing Spots	2
<b>Operational CH-46 Equivalents</b>	4
JP-5 (Gallons)	288,700
MOGAS (Gallons)	21,900
LFORM	Yes

# Ship's Organic Craft

Utility Boats	1
LCPL	2
7 Meter RHIB	1

# **Command and Control Systems**

Combat Information Center	Yes
Integrated Tactical Amphibious Warfare	
Data System	No
Ship Signals Exploitation Space	
(Flag Configured Only)	Yes
Flag Plot	
(Flag Configured Only)	Yes
Troop Operations & Logistics Center	Yes
Joint Intelligence Center	No
Supporting Arms Coordination	
Center (Flag Configured Only)	Yes
Tactical-Logistical Group No	
Helicopter Logistics Support Group	No
Tactical Air Control Center	No

Helicopter Direction Center Helicopter Coordination Section	No Yes
Medical Capabilities	
Operating Rooms	1
Post Operative Recovery/Intensive Care (Beds)	0

Isolation Ward (Beds)	4
Primary Care Ward (Beds)	8
Casualty Overflow (Beds)	No
Ship's Doctor	Yes
Ship's Dentist	Yes

### Ship's Cargo Handling Equipment

Forklifts (Electric/2-Ton)	10
Forklifts (Rough Terrain 6,000)	2
Cargo and Weapons Elevator (8-Ton)	1
Pallet Conveyors (1 <sup>1</sup> / <sub>2</sub> -Ton)	3
Monorails (2 Hooks Each	
With 2-Ton Capacity)	2
Boat and Aircraft Crane (30-Ton)	1

#### Well Deck

The landing craft numbers listed below are the maximum number of each type of craft that can be stowed in the well deck exclusive of any other craft. Combinations of these craft may be stowed in the well deck.

Length (Overall)	168'
Width	50'
Height	20'
LCĂC	1
LCU	1

#### Ship Weapons

CIWS, (Not Installed on all LPDs) 2 MK-36 Chaff Rocket (SRBOC) Launcher 4

# MCRP 3-31B\_\_\_\_\_\_ LPD 4

# <u>Ships in Class</u>

Hull	Ship's	Home	Flag
Number	Name	Port	Configured
LPD-4	USS Austin	Norfolk, VA	No
LPD-5	USS Ogden	San Diego, CA	No
LPD-6	USS Duluth	San Diego, CA	No
LPD-7	USS Cleveland	San Diego, CA	Yes
LPD-8	USS Dubuque	San Diego, CA	Yes
LPD-9	USS Denver	San Diego, CA	Yes
LPD-10	USS Juneau	Sasebo, Japan	Yes
<i>LPD-12</i>	USS Shreveport	Norfolk, VA	Yes
LPD-13	USS Nashville	Norfolk, VA	Yes
LPD-14	<b>USS Trenton</b>	Norfolk, VA	No
<i>LPD-15</i>	<b>USS</b> Ponce	Norfolk, VA	No

# Amphibious Transport Dock USS San Antonio (LPD-17)Class



#### Mission

The assigned mission of the LPD is to transport and land troops and their essential equipment and supplies by means of embarked landing craft or amphibious vehicles augmented by helicopter lift in an amphibious assault.

#### **General Comments**

The LPD is a general purpose amphibious ship with substantial lift capacities for troops, vehicles, landing craft, cargo, and bulk fuel. It combines features of the LHD, LKA, the LPH, the LSD, and the LST. The LPD is capable of ballasting to permit loading and launching of landing craft and assault amphibious vehicles. Vehicles can move about the various decks by a series of power operated ramps. The well deck can accommodate all types of landing craft currently in the amphibious force inventory. A limited number of helicopters and V-22 Osprey may be transported on the flight deck as the LPD serves as a helicopter platform for landing embarked troops and their supplies. It also serves as a refueling station for helicopters of the landing force. Troops, vehicles, and equipment can be loaded or offloaded by helicopter and landing craft simultaneously.

The LPD-17 class of ships are not flag configured.

# **General Information**

Length Overall	208.5m
Beam 31.9m	
Displacement full (metric tons)	25,296
Draft	7 <b>m</b>
Main Engines	4
Boilers	2
Shafts	2
Shaft Horsepower	Classified
Speed (Knots)	22
Range at 20 Knots (nmi)	Classified
Bow Thruster	No
Staff Accommodations	No
Crew Accommodations	<i>493</i>
Ship's Chaplain	Yes

# Landing Force Lift General Information

Officer Accommodations	66
Enlisted Accommodations	
(E-7/E-6 and Below)	<i>41/597</i>
Surge Accommodations	
(E-7/E-6 and Below)	81
Vehicle Square	2323 sq m
Cargo Cube	708 cu m
Helicopter Landing Spots	2
<b>Operational CH-46 Equivalents</b>	4
JP-5 (Gallons)	1190 си т
MOGAS (Gallons)	38 cu m
LFORM	Yes
Ship's Organic Craft	
7 MeterRHIB	2
LCPL	1

# **Command and Control Systems**

Combat Information Center	Yes
Integrated Tactical Amphibious Warfare	
Data System	No
Ship Signals Exploitation Space	Yes
Troop Operations & Logistics Center	Yes
Joint Intelligence Center	Yes
Supporting Arms Coordination	
Center	Yes
Tactical-Logistical Group	No
Helicopter Logistics Support Group	No
Tactical Air Control Center	No
Helicopter Direction Center	No
Helicopter Coordination Section	Yes

# Medical Capabilities

Operating Rooms	2
Post Operative Recovery/Intensive	
Care (Beds)	0
Isolation Ward (Beds)	4
Primary Care Ward (Beds)	24
Casualty Overflow (Beds)	100
Ship's Doctor	Yes
Ship's Dentist	Yes

### Ship's Cargo Handling Equipment

Forklifts (Electric/2-Ton)	10
Forklifts (Rough Terrain 6,000)	2
Cargo and Weapons Elevator (8-Ton)	1
Pallet Conveyors (1 <sup>1</sup> / <sub>2</sub> -Ton)	3
Monorails (2 Hooks Each	
With 2-Ton Capacity)	6
Boat and Aircraft Crane (30-Ton)	1

### Well Deck

The landing craft numbers listed below are the maximum number of each type of craft that can be stowed in the well deck exclusive of any other craft. Combinations of these craft may be stowed in the well deck.

Length (Overall)	168'
Width	50'
Height	20'
LCAC	2
LCU	1
LCM-8	4

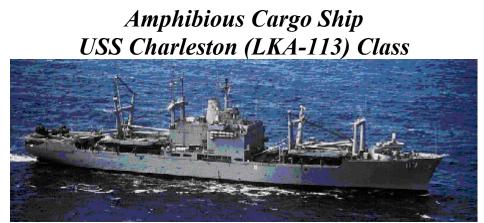
### Ship Weapons

MK 41, 16 Cell VLS, 64 ESSMs	1
MK 144 Mod 0 RAM Launchers	2
MK 16 Mod 2 CIWS Gun Mounts	2
MK26 Mod 17 50 Cal Machine Guns	4

# *MCRP 3-31B*\_\_\_\_\_\_*LPD 17*

# Ship's in Class

Hull	Ship's	Home	Scheduled
Number	Name	Port	Delivery
LPD-17	San Antonio	Norfolk	Sep 03
LPD-18	New Orleans	San Diego	May 04
LPD-19	TBD	Norfolk	Mar 05
LPD-20	TBD	San Diego	<b>Dec</b> 04
LPD-21	TBD	San Diego	Jun 05
LPD-22	TBD	San Diego	Sep 05
LPD-23	TBD	Sasebo	<b>Jun 06</b>
LPD-24	TBD	San Diego	<b>Dec</b> 06
LPD-25	TBD	Norfolk	<b>Jun 07</b>
LPD-26	TBD	Norfolk	Sep 07
LPD-27	TBD	Norfolk	Jun 08
LPD-28	TBD	Norfolk	Sep 08



USS EL Paso (LKA-117) Pictured

#### Mission

The assigned mission of the amphibious cargo ship (LKA) is to transport and land combat equipment and material with attendant personnel in an amphibious assault.

#### **General Comments**

The USS Charleston LKA provides considerable flexibility in cargo stowage methods. The cargo elevators servicing holds 1, 3, and 4 make all categories of supplies and all levels available simultaneously to either the main deck or the helicopter platform. Use of the ship's forklifts and pallet transporters speed the maneuvering of cargo in the holds and enable delivery to various debarkation stations via the main deck passageways which run the length of the ship. The arrangement and quantity of booms and cargo elevators make it possible to simultaneously embark/debark vehicles and cargo. Vehicles in upper stowage spaces can be embarked/debarked through the hatches with cargo booms, while pallets are embarked/debarked in lower stowage spaces by elevators. The main deck hatch of hold 2 is unobstructed and can be opended for embarking/debarking of vehicles without the delay of unloading landing craft stowed on the hatch. Hold 4 is well suited for high priority cargo because of its direct access to the flight deck or main deck via elevator number 5.

# LKA\_\_\_\_\_

Length Overal	575'
Beam	82'
Displacement Light/Full (Tons)	10,000/20,700
Draft	25'
Main Engines	1
Boilers	2
Shafts	1
Shaft Horsepower	19,250
Speed (Knots)	20
Range at 16 Knots (nmi)	9,600
Bow Thruster	No
Staff Accommodations	N/A
Crew Accommodations	409
Ship's Chaplain	No

# Command and Control Systems

Combat Information Center	Yes
Integrated Tactical Amphibious Warfare	
Data System	No
Ship Signals Exploitation Space	No
Flag Plot	No
Landing Force Operations Center	No
Joint Intelligence Center	No
Supporting Arms Coordination	
Center	No
Tactical-Logistical Group	No
Helicopter Logistics Support Group	No
Tactical Air Control Center	No
Helicopter Direction Center	No
Helicopter Coordination Section	Yes

# Medical Capabilities

<b>Operating Rooms</b>	1
Post Operative Recovery/Intensive	
Care (Beds)	0
Isolation Ward (Beds)	4
Primary Care Ward (Beds)	9
Casualty Overflow (Beds)	0
Ship's Doctor	Yes
Ship's Dentist	No

# Landing Force Lift General Information

<b>Officer</b> Accommodations	15
Enlisted Accommodations	
(E-7/E-6 and Below)	6/205
Surge Accommodations	
(E-6 and Below)	0
Vehicle Square	47,000
Cargo Cube	88,100
Helicopter Landing Spots	1
<b>Operational CH-46 Equivalents</b>	0
JP-5 (Gallons)	52,600
MOGAS (Gallons	0
LFORM	Yes

# Ship's Cargo Handling Equipment

Forklifts (Electric/2-Ton)	10
Forklifts (Diesel/3-Ton)	2
Pallet Jacks (Electric/2-Ton)	3
Cargo Elevators (2-Ton)	5
Cargo Elevators (6-Ton)	1
15-Ton Booms	8
40-Ton Booms	2
70-Ton Booms	2
Ship's Organic Craft	
LCM-8	4
LCPL	2
Ship Weapons	

CIWS, MK-16 20 mm	2
3-In-50 (Twin MK-33)	2
MK-36 Chaff Rocket (SRBOC)	
Launcher	4

MCRP 3-31B		<i>LKA</i>
<u>Ship's In Class</u>		
Hull Number	Ship's Name	Location
LKA-113	<b>USS</b> Chalelston	NISMF Philadelphia,
PALKA-114	USS Durham	NISMF Pearl Harbor, HI
LKA-115	<b>USS Mobile</b>	NISMF Philadelphia,
PALKA-116	<b>USS St Louis</b>	NISMF Pearl Harbor,
HILKA-117	USS El Paso	NISMF Philadelphia, PA

**NOTE:** All five LKA's have been decommissioned and layed up in the Navy Inactive Fleet as Mobilization Assests (Maintenance Category B) through FY09.

Downloaded from http://www.everyspec.com

LSD 36



USS Mount Vernon (LSD-39) Pictured

### Mission

The assigned mission of the LSD 36 is to transport and launch loaded amphibious craft and vehicles with their crews and embarked personnel in amphibious assaults by landing craft and amphibious vehicles. They can render limited docking repair service to small ships and craft.

### **General Comments**

Major spaces for carrying vehicles and/or cargo or conducting helicopter operations are the helicopter platform, the super deck, the mezzanine deck, and the well deck. The mezzanine deck, super deck, and helicopter platform are constructed so they can be removed and stored ashore should assigned operations dictate. Mezzanine decks are frequently removed, but super decks and helicopter platforms are rarely removed. Vehicles may be loaded via landing craft into the well deck or lifted aboard by crane to the super deck for transit via ramps to other decks for stowage. Vehicles stowed in the well deck should be at least 50 feet forward of any landing craft to minimize potential salt water immersion during ballasting operations.

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#### *MCRP 3-31B*

# **General Information**

Length Overall	562'
Beam	84'
Displacement Light/Full (Tons)	8,200/13,680
Draft	20'
Main Engines	2
Boilers	2
Shafts	2
Shaft Horsepower	24,000
Speed (Knots)	22
Range at 12 Knots (nmi)	14,800
Bow Thruster	No
Staff Accommodations	No
Crew Accommodations	426
Ship's Chaplain	No

# Landing Force Lift General Information

Officer Accommodations	25
Enlisted Accommodations	
(E-7/E-6 and Below)	8/303
Surge Accommodations	
(E-6 and Below)	0
Vehicle Square (With Mezzanine/	19,700
Without Mezzanine)	8,800
Cargo Cube	1,800
Helicopter Landing Spots	1
<b>Operational CH-46 Equivalents</b>	0
JP-5 (Gallons)	31,500
MOGAS (Gallons)	0
LFORM	No

### **Command and Control Systems**

Combat Information Center	Yes
Integrated Tactical Amphibious Warfare	
Data System	No
Ship Signals Exploitation Space	No
Flag Plot	No
Landing Force Operations Center	No
Joint Intelligence Center	No
Supporting Arms Coordination	
Center	No
Tactical-Logistical Group	No
Helicopter Logistics Support Group	No
Tactical Air Control Center	No
Helicopter Direction Center	No
Helicopter Coordination Section	Yes

# Medical Capabilities

Operating rooms	0
Post Operative Recovery/Intensive	
Care (Beds)	1
Isolation Ward (Beds)	2
Primary Care Ward (Beds)	8
Casualty Overflow (Beds)	0
Ship's Doctor	No
Ship's Dentist	No

#### Well Deck

The landing craft numbers listed below are the maximum number of each type of craft that can be stowed in the well deck exclusive of any other craft. Combinations of these craft may be stowed in the well deck.

Length (Overall)	436'
Width	50'
Height	21'
LCAC (With Mezzanine/	2
Without Mezzanine)	3
LCU (With Mezzanine/	1
Without Mezzanine)	3

### Ship's Cargo Handling Equipment

Forklifts (Rough Terrain 6,00)	1
Monorails (6-Ton)	2
Boat and Aircraft Crane (1-20 ton and	2
1- 60 ton)	

#### Ship's Organic Craft

*LCPL* 2

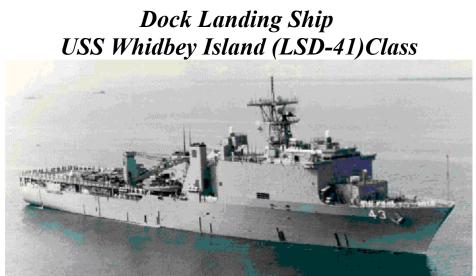
#### Ship Weapons

CIWS	2
MK-36 Chaff Rocket (RBOC) Launcher	4

# MCRP 3-31B\_\_\_\_\_

# <u>Ships In Class</u>

Hull Number	Ship's Name	Home Port
LSD-36	USS Anchorage	San Diego, CA
LSD-37	USS Portland	Little Creek, VA
LSD-39	<b>USS</b> Mount Vernon	San Diego, CA



USS Fort McHenry (LSD-43) Pictured

Mission

The assigned mission of the dock landing ship (LSD-41) is to transport and launch loaded amphibious craft and vehicles with their crews and embarked personnel in amphibious assaults by landing craft and amphibious vehicles. They can render limited docking repair service to small ships and craft.

**General Comments** 

The LSD-41 is the replacement for the LSD-28 ships. It provides for greater storage space of weapons and equipment, improved facilities for embarked troops, greater range of operations, and the capability to embark either conventional landing craft or LCAC. The ships incorporate material handling equipment including elevators, package/roller conveyors and forklifts, pallet transporters, and a turntable similar to that found on an LST. The turntable is located between the well deck and the helicopter deck to assist in the rapid turnaround of vehicles and equipment during loading/offloading operations.

#### LSD 41

# **General Information**

Length Overall	609'
Beam	84'
Displacement Light/Full (Tons)	10,560/15,165
Draft	20'
Main Engines (Geared Diesel)	4
Boilers	N/A
Shafts	2
Shaft Horsepower	34,000
Speed (Knots)	Classified
Range	Classified
Bow Thruster	No
Staff Accommodations	No
Crew Accommodations	413
Ship's Chaplain	No

#### Landing Force Lift General Information

Officer Accommodations	27
Enlisted Accommodations	
(E-7/E-6 and Below)	13/362
Surge Accommodations	
(Officer/E-7/E-6 and Below)	7/7/88
Vehicle Square	11,831
Cargo Cube	8,970
Helicopter Landing Spots	2
<b>Operational CH-46 Equivalents</b>	0
JP-5 (Gallons)	53,000
MOGAS (Gallons)	766
LFORM	No

#### **Command and Control Systems**

Command and control systems on the LSD-41 are designed to support the command, control, communications, and intelligence  $(C^3l)$ requirements for own ship independent operations and in conjunction with an amphibious task force.

Combat Information Center	Yes
Integrated Tactical Amphibious Warfare	
Data System	No
Ship Signals Exploitation Space	No
Flag Plot	No
Landing Force Operations Center	No
Joint Intelligence Center	No
Supporting Arms Coordination Center	No
Tactical-Logistical Group	Yes
Helicopter Logistics Support Group	No
Tactical Air Control Center	No
Helicopter Direction Center	No
Helicopter Coordination Section	Yes

# Medical Capabilities

Operating Rooms	1
Post Operative Recovery/Intensive	
Care (Beds)	1
Isolation Ward (Beds)	2
Primary Care Ward (Beds)	5
Casualty Overflow (Beds)	0
Ship's Doctor	Yes
Ship's Dentist	Yes

# Ship's Cargo Handling Equipment

Reaching and Tiering Forklifts	
(Electric/2-Ton)	2
Pallet Jacks (Electric/3-Ton)	2
Forklifts (Rough Terrain 6,000)	2
Cargo Elevator (8-Ton)	1
Bridge Crane (15-Ton (2x7 <sup>1</sup> / <sub>2</sub> -Ton Hoists)	1
Boat and Aircraft Crane	
(60-Ton and 20-Ton)	2
Turntables	1

#### Well Deck

The landing craft numbers listed below are the maximum number of each type of craft that can be stowed in the well deck exclusive of any other craft. Combinations of these craft may be stowed in the well deck.

Length (Overall)	440'
Width	50'
Height	27'
LCAC	4
LCU	3

#### Ship's Organic Craft

Utility Boat	1
LCPL	2

#### Ship Weapons

CIWS, MK-16 20 mm	2
25 mm Chain Gun	2
SRBOC, MK-137 MOD 1	4
Rolling Airframe Missile SSDS (Not all ships)	2

# MCRP 3-31B\_\_\_\_\_

# <u>Ships in Class</u>

Hull Number	Ship's Name	Home Port
<i>LSD-41</i>	USS Whidbey Island	Little Creek, VA
<i>LSD-42</i>	<b>USS Germantown</b>	Sasebo, Japan
<i>LSD-43</i>	USS Fort McHenry	San Diego, CA
LSD-44	<b>USS Gunston Hall</b>	Little Creek, VA
<i>LSD-45</i>	USS Comstock	San Diego, CA
<i>LSD-46</i>	USS Tortuga	Little Creek, VA
LSD-47	USS Rushmore	San Diego, CA
LSD-48	USS Ashland	Little Creek, VA

# Dock Landing Ship (Cargo Variant) USS Harpers Ferry (LSD-49)



USS Harpers Ferry (LSD-49) Pictured

Mission

The assigned mission of the dock landing ship (LSD) is to transport and launch loaded amphibious craft and vehicles with their crews and embarked personnel in amphibious assaults by landing craft and amphibious vehicles. They can render limited docking repair service to small ships and craft.

# **General Comments**

The LSD-49 is the cargo variant (CV) of the LSD-41 ship. Its well deck is shortened to half the length of the LSD-41 to provide space for additional munitions and vehicle stowage. The LSD-49 has stowage space for 18 percent more vehicles and seven times as much stowage space for cargo as the LSD-41. It is not equipped with a well deck bridge crane and is not designed to perform LCAC organizational level maintenance. Its single 30-ton crane can offload only to the starboard side. Intraship, it has 15 forklifts, 2 lift platforms, 3 elevators and 2 pallet transporters for rapid cargo movement

# **General Information**

Length Overall	609'
Beam	84'
Displacement Light/Full (Tons)	11,328/16,740
Draft	20'
Main Engines (Geared Diesel)	4
Boilers	N/A
Shafts	2
Shaft Horsepower	34,000
Speed (Knots)	Classified
Range	Classified
Bow Thruster	No
Staff Accommodations	No
Crew Accommodations	413
Ship's Chaplain	No

# Landing Force Lift General Information

Officer Accommodations	27
Enlisted Accommodations	
(E-7/E-6 and Below)	13/362
Surge Accommodations	
(Officer/E-7/E-6 and Below)	7/7/88
Vehicle Square	20,200
Cargo Cube	67,600
Helicopter Landing Spots	2
<b>Operational CH-46 Equivalents</b>	0
JP-5 (Gallons)	50,600
MOGAS (Gallons)	0
LFORM	Yes

### **Command and Control Systems**

Command and control systems on the LSD-49 (CV) are designed to support the C3I requirements for own ship independent operations and in conjunction with an amphibious task force.

Combat Information Center	Yes
Integrated Tactical Amphibious Warfare	
Data System	No
Ship Signals Exploitation Space	No
Flag Plot	No
Landing Force Operations Center	No
Joint Intelligence Center	No
Supporting Arms Coordination Center	No
Tactical-Logistical Group	Yes
Helicopter Logistics Support Group	No
Tactical Air Control Center	No

Helicopter Direction Center	No
Helicopter Coordination Section	Yes

#### Medical Capabilities

<b>Operating Rooms</b>	1
Post Operative Recovery/Intensive	
Care (Beds)	1
Isolation Ward (Beds)	2
Primary Care Ward (Beds)	5
Casualty Overflow (Beds)	No
Ship's Doctor	No
Ship's Dentist	No

#### Ship's Cargo Handling Equipment

Forklifts (Electric/2-Ton	9
Forklifts (Rough Terrain 4,000)	6
Cargo Lift Platforms	3
Cargo Elevator (8-Ton)	1
Boat and Aircraft Crane (30-Ton)	1

#### Well Deck

The landing craft numbers listed below are the maximum number of each type of craft that can be stowed in the well deck exclusive of any other craft. Combinations of these craft may be stowed in the well deck.

Length (Overall)	184'
Width (In Feet)	50'
Height (In Feet)	30'
LCAC	2
LCU	1

### Ship's Organic Craft

Utility Boat	1
LCPL	2
Ship Weapons	

# CIWS MK-16 20 mm

20 mm Guns, MK-68 MOD 1	2
SRBOC, MK-137 MOD 1	4
Rolling Airframe Missile SSDS	2

2

# MCRP 3-31B\_\_\_\_\_

# <u>Ships in Class</u>

Hull Number	Ship's Name	Home Port
LSD-49	USS Harpers Ferry	San Diego, CA
LSD-50	USS Carter Hall	Little Creek, VA
LSD-51	USS Oak Hill	Little Creek, VA
LSD-52	USS Pearl Harbor	San Diego, CA



USS La Moure County (LST-1194) Pictured

Mission

The assigned mission of the LST is to transport and land amphibious assault vehicles, tanks, combat vehicles, and equipment in amphibious assaults.

#### **General Comments**

The USS Newport LST employs higher speeds and trimmer lines than slower snub-nosed LSTs of World War II. It has a sharper clipper-ship bow topped by two huge derricks used to extend and retract its bow ramp. The 110-foot aluminum ramp has a 75-ton capacity and is extended and retracted by a semiautomatic system of sensing switches which operate power winches below decks. When extended, the ramp is attached to the main deck by a pivot post. The end of the ramp rest on a beach or pontoon causeway, depending on the water depth and the beach gradient. USS Newport LST is also the first amphibious ship to be fitted with an internal side propulsion unit located below the waterline in the vicinity of the bow. The bow thruster allows the bow to be pushed from side to side while the stern remains relatively stationary. This increased maneuverability has proven invaluable in restricted waters and especially during mooring and causeway marriages. The first stern gate used on an LST is found in the USS Newport LST and allows loading and launching of assault amphibious vehicles (AAVs) as well as sterngate marriages with landing craft utility (LCU).

# LST 1179\_\_\_\_\_

# **General Information**

Length Overall	522'
Beam	70'
Displacement Light/Full (Tons)	4,975/8,450
Draft	20'
Main Engines (Diesel)	6
Boilers (150 PSI)	2
Shafts	2
Shaft Horsepower	16,800
Speed (Knots)	22
Range	14,250
Bow Thruster	Yes
Staff Accommodations	No
Crew Accommodations	245
Ship's Chaplain	No

# Landing Force Lift General Information

<b>Officer</b> Accommodations	20
Enlisted Accommodations	
(E-7/E-6 and Below)	21/273
Surge Accommodations	
(E-6 and Below)	72
Vehicle Square	16,500
Cargo Cube	4,500
Helicopter Landing Spots	1
<b>Operational CH-46 Equivalents</b>	0
JP-5 (Gallons)	19,100
MOGAS (Gallons)	7,200
LFORM	No

# Command and Control Systems

Combat Information Center	Yes
Integrated Tactical Amphibious Warfare	
Data System	No
Ship Signals Exploitation Space	No

Flag Plot		No
Landing Force Operations Center		No
Joint Intelligence Center		No
Supporting Arms Coordination		
Cente	r	No
Tactical-Logistical Group		No
Helicopter Logistics Support Group		No
Tactical Air Control Center		No
Helicopter Direction Center		No
Helicopter Coordination Section		Yes
Ship's Organic Craft		
LCVP		3
LCPL		1

# LCPL Medical Capabilities

Operating Rooms	0
Post Operative Recovery/Intensive	
Care (Beds)	0
Isolation Ward (Beds)	0
Primary Care Ward (Beds)	0
Casualty Overflow (Beds)	0
Ship's Doctor	No
Ship's Dentist	No

# Ship's Cargo Handling Equipment

Forklifts (Diesel/3-Ton)	2
Forklifts (Rough Terrain 6,000)	1
Cargo Booms (10-Ton)	2
Turntables	2

### Ship Weapons

CIWS (Not installed on all LSTs)	1
MK-36 Chaff Rocket (RBOC) Launcher	4

MCRP 3-31B Ships in Class		LST 1179
Hull	Ship's Name	Location
LST-1184	USS Frederick (Reserve Fleet)	Pearl Harbor, HI
LST 1182	USS Fresno	NISMF Pearl Harbor, HI
LST 1187	USS Tuscaloosa	NISMF Pearl Harbor HI
LST 1190	USS Boulder	NISMF Philadelphia, PA
LST 1191	USS Racine NIS	MF Pearl Harbor, HI
LST-1194	USS La Moure County (Reserve Fleet)	Little Creek, VA

**NOTE:** The LST's listed above plus four in the Navy Inactive Fleet (Maintenance Category B) are in support of the Amphibious Lift Enhancement Plan (ALEP) to ensure adequate amphibious lift availability in a crisis LSTs 1182, 1187, 1190 and 1191 will be retained as Mobilization Assets until FY09.

LCAC

# Landing Craft Air Cushion (LCAC)



Mission

To land heavy vehicles, equipment, personnel, and cargo in amphibious assaults.

#### **General Information**

The LCAC is a new generation of amphibious assault landing craft. Combining the heavy lift capacity of the surface assault with high speeds of helicopter borne assault, the LCAC adds a new dimension to the capabilities of amphibious forces. Capable of traveling over land and water, LCAC exposes 70 percent of the world's littoral to amphibious operations. At over-the-horizon (OTH) distances of 12 to 100 nmi, LCAC offers the military planner another method for attaining surprise when conducting amphibious operations.

The addition of air cushion technology adds high speed and long range to surface-borne amphibious operations. Additional flexibility is provided by LCAC's ability to operate independent of tides and hydrographic constraint. In some cases the LCAC will have a high water mark. Weather can effect LCAC operations, but it is less of a factor than for other shipto-shore delivery means.

#### **Characteristics**

Length Overall (Off Cushion/	81'
On Cushion)	87'11''
Width Overall (Off cushion/	43'8"
On Cushion)	47'
Height (On Cushion)	23'8"
Cargo Deck Length	67'
Cargo Deck Width (Max)	27'
Cargo Deck Square Feet	1,809
Troop Capacity	24
Bow Ramp Width	28'4''
Bow Ramp Angle (Degrees)	14
Stern Ramp Width	14'10"
Stern Ramp Angle (Degrees)	14
Cargo Capacity (Design/ Overload)(Tons)	60/75
Displacement (Full Load/	166.6
Capacity Load) (Tons)	181.6

Speed (Knots)	<i>40</i> +
Range (nmi)	200
Propulsion (TF 408 Gas Turbines)	4
Crew	5



Mission

To land heavy vehicles, equipment, personnel, and cargo in an amphibious assault.

#### **General Information**

The tank landing craft (LCT of World War II is the predecessor of the LCU. Because of the LCT's versatility and use in landing almost anything, the name was changed to LCU. This highly adaptable craft, like others of the landing craft family, has been adapted for many purposes including salvage operations, ferry boats for vehicles and passengers, and underwater test platforms. It is a self-sustaining craft with the typical habitability features found aboard ships. It's welded steel hull provides high durability with deck loads of 800 pounds per square foot. Arrangement of machinery and equipment has taken into account built-in redundancy in the event of battle damage. The craft features two engine rooms separated by a watertight bulkhead, to permit limited operation in the event that one engine room is disabled. An anchor system is installed on the starboard side aft to assist in retracting from the beach.

#### **Characteristics**

Length Overall	<del>134'9''</del> 135'3"
Width Overall	29'9"
Height (Mast Folded)	17'9"
Cargo Deck Length	<del>121'</del> 100'
Cargo Deck Width (Max)	<del>25'</del> 17'4"
Cargo Deck Square Feet 1,850	2200 (possible?)
Displacement (Loaded) (Tons)	<mark>437</mark> 383
Troop Capacity (On Deck)	400

Bow Ramp Width	<del>14'9"</del> 14'3"
Stern Ramp Width	18'
Cargo Capacity (Tons)	180
Speed (Knots)	12
Range (nmi)	1,200
Propulsion (Diesel)	<mark>3-2</mark>
Draft Fore Empty/Loaded	<del>3'6"</del> 2'6"/4'4"
Draft Aft Empty/Loaded	<del>6'10''</del> 4'8"/6'7"
Crew <del>(Wartime/Peacetime)</del>	<u>    14/10  </u> 11



# LCM Mark 8 (LCM 8)

Mission

To land personnel, supplies, and equipment in an amphibious assault or in direct support of Maritime Prepositioned Force operations.

#### **Characteristics**

	Steel	Aluminun
Length Overall	73'7''	74'6''
Width Overall	21'1"	21'1"
Cargo Deck Length	42'	42'
Cargo Deck Width (Max)	14'	17'
Cargo Deck Square Feet	588	714
Displacement (Loaded) (Tons)	125	107
Troop Capacity	150	200
Bow Ramp Width	14'9''	14'9"
Cargo Capacity (Tons)	60	180
Speed (Knots)	9	12
Range (nmi)	190	150
Propulsion (Diesel)	2	2
Draft Fore	4'5"	3'10"
Draft Aft	4'10"	4'3"
Crew (Wartime/Peacetime)	5/4	5/4

### MCRP 3-31B\_

# Glossary

# PART 1, ABBREVIATIONS AND ACRONYMS

AAVassault amphibious vehicle	LPDamphibious transport dock
	LPHamphibious assault ship
CATF commander, amphibious	LSD dock landing ship
task force	LST tank landing ship
CICcombat information center	
CIWS close in weapon system	MEB Marine Expeditionary Brigade
CLFcommander, landing force	MEF Marine Expeditionary Force
CV cargo variant	MEU Marine Expeditionary Unit
HCS helicopter coordination	nminautical mile
section	NSSMSNATO Seasparrow missile
HDChelicopter direction center	system
HLSGhelicopter logistics support	·
group	OTHover-the-horizon
ITAWDSintegrated tactical	PHIBRON amphibious squadron
amphibious warfare data system	
1 0 0	RRF Ready Reserve Force
JICjoint intelligence center	·
	SACC supporting arms coordination
LCAClanding craft air cushion	center
LCCamphibious command ship	SLCP ship's loading characteristics
LCM landing craft mechanized	pamphlet
LCPLlanding craft, personnel, large	SSDSShip's Self Defense System
LCUlanding craft utility	SSES ship signals exploitation space
LCVPlanding craft, vehicle,	
personnel	TACCtactical air control center
LFOClanding force operations center	TACLOG tactical-logistical group
LHAamphibious assault ship	V/STOL vertical/short takeoff and
(general purpose)	landing
LHD amphibious assault ship	-
(multipurpose)	
LKAamphibious cargo ship	

# Glossary

# PART 2, TERMS AND DEFINITIONS

**ballasting operations -** Operations conducted by amphibious shipping to flood the ship's well deck allowing landing craft to enter the ship and load or unload personnel, vehicles and cargo. Although this method is time consuming, it is considered the safest method of embarkation.

**broken stowage -** The space lost in the holds of a vessel because of the contour of the ship and the shape of the cargo. Also, a factor applied to the available space for embarkation due to the loss between boxes, between vehicles, around stanchions, and over cargo. The factor will vary depending on the type and size of vehicles, type and size of general cargo, training and experience of loading personnel, type of loading, method of stowage, and configuration of compartments.

**flag spaces -** Billeting and office spaces aboard the LHA, LHD, and command configured LPD 4 Class amphibious shipping allocated to the CATF staff.

**helicopter platform** - A term used for amphibious shipping with the capability to support the landing of helicopters for the purpose of embarking or debarking troops and cargo and for refueling aircraft.

**mezzanine deck -** Applicable to the LSD 36 Class amphibious ship. A system of 14 portable/removable sections installed between the well deck and the super deck for stowage of vehicles and cargo. When installed, ramps provide vehicle access from the well deck to the super deck and flight deck. Also referred to as "'tween" deck.

**MEU (Marine Expeditionary Unit)** - A task organization which is normally built around a battalion landing team, reinforced helicopter squadron, and logistic support unit.

**sterngate marriage -** Weather conditions permitting, displacement landing craft are brought to the sterngate, secured, and allowed to lower their bow ramp to a dry well deck. Personnel and vehicles can be quickly loaded or unloaded over the ramp and the need for time-consuming ballasting operations are negated. **super deck** - Applicable to the LSD 36 Class amphibious ship. Installed forward of the flight deck, it provides a stowage area for vehicles and cargo and can be accessed from the well deck via the mezzanine deck ramps or lifted aboard using the ship's cranes.