STANDARD AIRCRAFT CHARACTERISTICS

EA-6B

GRUMMAN

DECEMBER 1971
NAVAL AIR SYSTEMS COMMAND

WING
AREA: 528.9 SQ FT (excluding fillets)
SECTIONS
TIP: NACA 64A005.9 MOD
FOLD: NACA 64A008.4 MOD
WING STA. 33: NACA 64A009 MOD
ASPECT RATIO: 5.31
MAC: 130.8 IN.

OUTBOARD WING TANKS
275 GALLONS

AFT FUS. 643 GALS.

INBOARD WING TANKS 702 GALS.

MID, FUS. 256 GALS.

FWD. FUS. 392 GALS.

PODS & TANKS UP TO 3600 LBS

FUS. CENTERLINE
PODS & TANKS UP TO 3600 LBS

REMOVABLE REFUELING BOOM
### POWER PLANT
- Number and Model: (2) J52-P-8A
- Manufacturer: Pratt & Whitney
- Engine Specification No.: N-1844A
- Type: Twin-Spool Axial-Flow
- Augmentation: None
- Length: 117 in.
- Ejector Diameter: 20.44 in.
- Diameter of Nacelle Base: 21.00 in.
- Nacelle Base Area (each): 0.127 sq ft
- Dry Weight: 2,188 lbs

### ELECTRONICS

#### OFFENSIVE COUNTERMEASURES
- Tactical Jammer, Low-Band: OT-21/ALO-99(V)
- Tactical Jammer, P-Band: OR-41/ALO-99 (V)
- Tactical Jammer, S-Band: OR-42/ALO-99 (V)
- Surveillance Subsystem: OR-40/ALO-99 (V)

#### DEFENSIVE COUNTERMEASURES
- Systems Integration Receiver: ALR-42
- Repeater-Jammer (2): ALO-41
- Repeater-Jammer (2): ALO-100
- Chaff Dispenser: ALE-26A
- Communications-Jammer: ALO-92

#### NAVIGATION
- Air Data Computer: CP-1106/A
- Search Radar: APQ-129A
- Doppler Radar: APN-153
- Radar Altimeter: APN-141
- AFCS: ASW-16A
- Attitude Reference Heading System: ASN-50
- Vertical Display: AWA-1
- Analog/Digital Converter: CV-2434/AAY-6
- Synchro Signal Adapter: T-1073A/A

#### COMMUNICATIONS
- IEC Package: ASQ-57B
- UHF ADF: ARA-48
- UHF Comm: RT-642/ASQ
- TACAN: RT-541/ASQ
- TACAN Decoder: KY-306/ASQ
- IFF Coder: KY-533/ASQ
- ICS: AIC-14A
- HF Comm: ARC-105
- Security: Julieta-28

### MISSION AND DESCRIPTION
The EA-6B is a four place, all weather, twin-turbo-jet, electronic warfare aircraft designed for carrier and advanced-base operation. The EA-6B configuration is derived from the basic two place A-6A airframe through the addition of a forward cockpit and equipment bay, incorporation of a pod-shaped fairing on top of the vertical fin and by strengthening the airframe structure to assure adequate operational fatigue life. The five external store stations are retained and used to carry jammer pods or fuel tanks.

The primary mission of this airplane is tactical jamming of area defense, fixed and mobile enemy installations and targets of opportunity. The airplane is capable of jamming communication networks, fire control installations, and simultaneous multiple site jamming. The airplane is capable of in-flight refueling.

All primary flight control systems are irreversible and fully hydraulic powered, each employing a dual tandem actuating cylinder supplied by two independent continuously operating hydraulic systems. Longitudinal control is effected by an all movable slab stabilizer. Lateral control is provided by flaperons, while a conventional rudder is used for directional control.

High lift devices employed are leading edge slats and S-Fowler type trailing edge flaps. Deceleration and glide path control is provided by split trailing edge, hydraulically actuated speed brakes located on the trailing edge of each wing tip. Main wheel anti-skid brakes and flaperon pop-up are utilized to provide short field landing capability. Nose tow catapulting is employed.

### DEVELOPMENT

- M-1 (modified A-6A) - aerodynamic flight tests, pod and antenna evaluation, May 1968
- M-2 (modified A-6A) - weapon system flight evaluation, August 1968
- P-1 First production airframe - first flight, April 1968
- P-6 First aircraft delivered to fleet, January 1971

### DIMENSIONS

<table>
<thead>
<tr>
<th>Wing</th>
<th>Area</th>
<th>Span</th>
<th>MAC</th>
<th>MAC sweepback</th>
<th>Length (maximum)</th>
<th>Height (normal static position)</th>
<th>Tread</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>528.9 sq ft</td>
<td>53 ft 0 in.</td>
<td>130.8 in.</td>
<td>25°</td>
<td>59 ft 4.5 in.</td>
<td>16 ft 3 in.</td>
<td>10 ft 10.5 in.</td>
</tr>
</tbody>
</table>
### PERFORMANCE SUMMARY

**TAKE-OFF LOADING CONDITION**

<table>
<thead>
<tr>
<th>TAKE-OFF WEIGHT</th>
<th>lb</th>
<th>48425</th>
<th>53825</th>
<th>58785</th>
<th>53882</th>
<th>56338</th>
<th>57579</th>
<th>53855</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel internal/external (JP-5)</td>
<td>lb./lb.</td>
<td>15,422/-</td>
<td>15,422/-</td>
<td>15,422/6020</td>
<td>15,422/-</td>
<td>15,422/4010</td>
<td>15,422/6015</td>
<td>15,422/-</td>
</tr>
<tr>
<td>Payload</td>
<td>lb</td>
<td>0</td>
<td>4783</td>
<td>929</td>
<td>4840</td>
<td>2889</td>
<td>1927</td>
<td>4813</td>
</tr>
<tr>
<td>Wing loading</td>
<td>lb./sq. ft</td>
<td>91.6</td>
<td>101.8</td>
<td>111.1</td>
<td>101.9</td>
<td>106.5</td>
<td>109.8</td>
<td>101.8</td>
</tr>
<tr>
<td>Stall speed power-off/take-off power</td>
<td>kn/kn.</td>
<td>112.0/96.3</td>
<td>121.0/106.7</td>
<td>126.5/113.5</td>
<td>121.0/106.7</td>
<td>123.8/111.1</td>
<td>125.0/111.8</td>
<td>121.0/106.7</td>
</tr>
<tr>
<td>Take-off run at S.L. - calm (A)(D)</td>
<td>ft</td>
<td>2450</td>
<td>3230</td>
<td>3909</td>
<td>3250</td>
<td>3640</td>
<td>3860</td>
<td>3240</td>
</tr>
<tr>
<td>Take-off run at S.L. - 25 kn. wind (A)(D)</td>
<td>ft</td>
<td>1630</td>
<td>2210</td>
<td>2900</td>
<td>2230</td>
<td>2530</td>
<td>2700</td>
<td>2220</td>
</tr>
<tr>
<td>Take-off to clear 50 ft. - calm (A)(D)</td>
<td>ft</td>
<td>3130</td>
<td>4000</td>
<td>4020</td>
<td>3610</td>
<td>4460</td>
<td>4690</td>
<td>4010</td>
</tr>
<tr>
<td>Range at S.L.</td>
<td>(A)</td>
<td>7730</td>
<td>5330</td>
<td>4720</td>
<td>5150</td>
<td>5020</td>
<td>4950</td>
<td>5270</td>
</tr>
<tr>
<td>Time: S.L. to 20,000 ft.</td>
<td>(A)</td>
<td>5.4</td>
<td>5.9</td>
<td>6.0</td>
<td>5.9</td>
<td>6.0</td>
<td>6.0</td>
<td>5.9</td>
</tr>
<tr>
<td>Time: S.L. to 30,000 ft.</td>
<td>(A)</td>
<td>11.1</td>
<td>11.2</td>
<td>11.2</td>
<td>11.2</td>
<td>11.2</td>
<td>11.2</td>
<td>11.2</td>
</tr>
<tr>
<td>Service ceiling (100 fpm)</td>
<td>(A)</td>
<td>41,400</td>
<td>36,800</td>
<td>34,800</td>
<td>36,800</td>
<td>35,800</td>
<td>35,300</td>
<td>38,700</td>
</tr>
<tr>
<td>Combat range</td>
<td>n.mi</td>
<td>1565</td>
<td>1093</td>
<td>2061</td>
<td>1068</td>
<td>1574</td>
<td>1228</td>
<td>1068</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>kn</td>
<td>416</td>
<td>410</td>
<td>415</td>
<td>409</td>
<td>413</td>
<td>414</td>
<td>410</td>
</tr>
<tr>
<td>Cruising altitude(s)</td>
<td>ft</td>
<td>34,400-40,200</td>
<td>31,350-36,150</td>
<td>29,350-36,750</td>
<td>31,250-36,600</td>
<td>30,300-37,450</td>
<td>30,100-38,150</td>
<td>31,300-36,100</td>
</tr>
<tr>
<td>Combat radius/mission time</td>
<td>n.mi/hr</td>
<td>750/3.69</td>
<td>341/1.99</td>
<td>800/4.18</td>
<td>320/1.90</td>
<td>575/3.80</td>
<td>707/4.42</td>
<td>335/2.64</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>n.mi/hr</td>
<td>415</td>
<td>349</td>
<td>389</td>
<td>342</td>
<td>413</td>
<td>413</td>
<td>409</td>
</tr>
<tr>
<td>IFR radius/mission time</td>
<td>(C)</td>
<td>697/3.95</td>
<td>687/3.91</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### COMBAT LOADING CONDITION

<table>
<thead>
<tr>
<th>COMBAT WEIGHT</th>
<th>lb</th>
<th>42256</th>
<th>47656</th>
<th>49971</th>
<th>47713</th>
<th>48168</th>
<th>48409</th>
<th>47686</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine power</td>
<td>MILITARY</td>
<td>MILITARY</td>
<td>MILITARY</td>
<td>MILITARY</td>
<td>MILITARY</td>
<td>MILITARY</td>
<td>MILITARY</td>
<td></td>
</tr>
<tr>
<td>Fuel (JP-5)</td>
<td>lb</td>
<td>9253</td>
<td>9253</td>
<td>15,422</td>
<td>9253</td>
<td>11,559</td>
<td>12,862</td>
<td>9253</td>
</tr>
<tr>
<td>Combat speed/altitude (B)</td>
<td>kn/ft</td>
<td>467/37,200</td>
<td>507/S.L.</td>
<td>521/S.L.</td>
<td>506/S.L.</td>
<td>470/30,000</td>
<td>473/30,000</td>
<td>463/30,000</td>
</tr>
<tr>
<td>Rate of climb/altitude (A)</td>
<td>fpm/ft</td>
<td>1820/37,200</td>
<td>6170/S.L.</td>
<td>6500/S.L.</td>
<td>5970/5000</td>
<td>2000/30,000</td>
<td>2180/30,000</td>
<td>1770/30,000</td>
</tr>
<tr>
<td>Combat ceiling (500 fpm)</td>
<td>ft</td>
<td>42,600</td>
<td>37,600</td>
<td>38,200</td>
<td>37,400</td>
<td>38,300</td>
<td>38,700</td>
<td>37,500</td>
</tr>
<tr>
<td>Rate of climb at S.L.</td>
<td>(A)</td>
<td>8990</td>
<td>6170</td>
<td>6500</td>
<td>5970</td>
<td>6510</td>
<td>6680</td>
<td>6110</td>
</tr>
<tr>
<td>Max. speed at S.L. (B)</td>
<td>kn</td>
<td>530</td>
<td>507</td>
<td>521</td>
<td>506</td>
<td>514</td>
<td>517</td>
<td>506</td>
</tr>
</tbody>
</table>

### LANDING WEIGHT

<table>
<thead>
<tr>
<th>LANDING WEIGHT</th>
<th>lb</th>
<th>34,907</th>
<th>40,552</th>
<th>36,948</th>
<th>40,630</th>
<th>38,774</th>
<th>37,871</th>
<th>40,584</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel</td>
<td>lb</td>
<td>1904</td>
<td>2149</td>
<td>2399</td>
<td>2170</td>
<td>2275</td>
<td>2324</td>
<td>2151</td>
</tr>
<tr>
<td>Stall speed power-off/approach power</td>
<td>kn/kn</td>
<td>95.0/89.0</td>
<td>104.9/98.0</td>
<td>98.3/92.0</td>
<td>105.0/88.1</td>
<td>101.7/95.3</td>
<td>100.1/93.7</td>
<td>104.9/88.0</td>
</tr>
<tr>
<td>Landing distance-ground roll/over 50 ft. obst.</td>
<td>ft/ft</td>
<td>1640/2310</td>
<td>1840/2550</td>
<td>1720/2400</td>
<td>1850/2600</td>
<td>1780/2480</td>
<td>1750/2440</td>
<td>1840/2560</td>
</tr>
</tbody>
</table>

**NOTES**

- **SERVICE**
- **NAVAIR 00-110AA6-3**
- **PERFORMANCE SUMMARY**
- **TAKE-OFF LOADING CONDITION**
- **COMBAT LOADING CONDITION**
- **LANDING WEIGHT**
- **NOTES**

(A) Military rated thrust and pods windmilling.
(B) Military rated thrust and pods jamming.
(C) Inflight refueling rendezvous point was selected as that point in the mission where the receiver aircraft has sufficient fuel, plus standard reserve, to return to base if inflight refueling is not accomplished.
(D) Maximum effort take-off.

EA-6B

**DECEMBER 1971**

(PS FORM 13101/4 Rev. 7/63)

(C) Military rated thrust and pods jamming.

1. FERRY RANGE with 5-300 gallon drop tanks (retained) is 2037 n.mi.
WIND OVER DECK REQUIRED FOR CATAPULTING VS. GROSS WEIGHT
BASED ON LAUNCH BULLETIN MINIMUM AIRSPEEDS

FLAPS 30°
SLATS AND GEAR DOWN
ALL STORE LOADINGS

C11 CATAPULT
C7 CATAPULT
STANDARD DAY
TROPICAL DAY

WIND OVER DECK - KNOTS

GROSS WEIGHT - 1000 LBS

NOTE
- Catapulting wind over deck based on: 1) aircraft minimum airspeeds acquired in the January 1971 carrier suitability trials and 2) appropriate catapulting maximum service capacity deadload endspans with aircraft thrust effects added. These curves should be used for planning purposes only. Actual catapulting operation should be in accordance with applicable Aircraft Technical Orders and Catapult Launch Bulletins.

WIND OVER DECK REQUIRED FOR ARRESTING VS. GROSS WEIGHT
BASED ON 17 UNITS A.D.D. CARRIER APPROACH SPEEDS

SEA LEVEL, STANDARD DAY
FLAPS 30°, SLATS & GEAR DOWN
SPEED BRAKES EXTENDED

MK 7 MOD 2 ARRESTING GEAR

WIND OVER DECK - KNOTS

GROSS WEIGHT - 1000 LBS

CARRI M PROACH AND STALL SPEEDS
LONGITUDINAL ACCELERATION AT 1.15 V_{PA}

SEA LEVEL, MILITARY POWER
FLAPS 30°, SLATS & GEAR DOWN

LONGITUDINAL ACCELERATION - FT/SEC^2

GROSS WEIGHT - 1000 LBS

EA-6B
DECEMBER 1971
<table>
<thead>
<tr>
<th>ECM Pods</th>
<th>Outboard</th>
<th>Inboard</th>
<th>Centerline</th>
<th>Inboard</th>
<th>Outboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) TACTICAL JAMMER, LOW BAND</td>
<td>(1) TACTICAL JAMMER, LOW BAND</td>
<td>(1) TACTICAL JAMMER, LOW BAND</td>
<td>(1) TACTICAL JAMMER, LOW BAND</td>
<td>(1) TACTICAL JAMMER, LOW BAND</td>
<td></td>
</tr>
<tr>
<td>(1) TACTICAL JAMMER, P-BAND</td>
<td>(1) TACTICAL JAMMER, P-BAND</td>
<td>(1) TACTICAL JAMMER, P-BAND</td>
<td>(1) TACTICAL JAMMER, P-BAND</td>
<td>(1) TACTICAL JAMMER, P-BAND</td>
<td></td>
</tr>
<tr>
<td>(1) TACTICAL JAMMER, S-BAND</td>
<td>(1) TACTICAL JAMMER, S-BAND</td>
<td>(1) TACTICAL JAMMER, S-BAND</td>
<td>(1) TACTICAL JAMMER, S-BAND</td>
<td>(1) TACTICAL JAMMER, S-BAND</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fuel Tanks</th>
<th>Outboard</th>
<th>Inboard</th>
<th>Centerline</th>
<th>Inboard</th>
<th>Outboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 300 GALLON DROP TANK</td>
<td>(1) 300 GALLON DROP TANK</td>
<td>(1) 300 GALLON DROP TANK</td>
<td>(1) 300 GALLON DROP TANK</td>
<td>(1) 300 GALLON DROP TANK</td>
<td>(1) 300 GALLON DROP TANK</td>
</tr>
</tbody>
</table>