

出國報告（出國類別：開會）

「IDGA 2012 軍事武器裝備科技展覽會」  
出國心得報告書

服務機關：國防部軍備局生產製造中心第二〇二廠

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## 摘要

IDGA 係一非官方組織，主要透過舉行會議及活動方式，邀請軍方及政府專業人士實施演講，並吸引軍方、政府及國防工業高階代表參與，促使公共服務及軍事防衛領域獲得提升的契機。IDGA 除了不定期舉行相關活動外，亦透過網路社群方式致力提供國防工業專業人士最新訊息、商業機會、商品介紹、網路音頻廣播作品及來自重要工業界領袖的演講。線上社群的會員得透過網路分享理念、最佳應用及商業方案，以延伸其實務經驗並與國防工業界進行互動。

透過成爲 IDGA 的成員，可收到最新的設備資訊，包含軍用車輛、軍用防彈衣、戰術車輛、網絡中心戰、軍事護甲保護、軍事物流、戰地醫療保健、國土安全、國防地理空間情報及重型車輛等項目，在武器的發展及應用上，可以朝著世界潮流發展，汲取強國作戰模式及武器發展的趨勢，讓我們能有更新更前衛的思維，前瞻規劃辦理各項產品的研製開發作業，並符合軍種作戰需求。

本次參與 IDGA 2012 軍事武器裝備科技展覽會研討後，針對砲管檢測、榴彈槍發射器、各式手槍、軍用緊急 LED 標示燈、油料過濾設備及軍用移動掩體設施等，與廠商研討了解美軍用兵需求及裝備的設計理念；藉由本次參與裝備研討及行銷活動，本次出國人員已見習國際行銷實務，並與武器設備製造商進行交流及細部研討，相關型錄及研討紀實可提供國內軍工業界參考運用。

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## 「IDGA 2012 軍事武器裝備科技展覽會」出國心得報告書

### 壹、 目的

- 一、 透過參加美國防衛協會(Institute for Defense and Government Advancement, IDGA)舉辦之「2012 軍事武器裝備科技展覽會」，汲取各國新式火炮武器系統、彈藥、多功能引信及防爆、防火裝置等軍用武器裝備研發成果，蒐整國外武器系統專業廠商成熟現役火炮武器系統、精準與增程彈藥及射控系統發展技術資料，俾奠定本廠後續武器系統與各式新式彈藥研發之基石；另廣泛蒐集各項火工作業機具設備與安全防護裝備，提昇本廠生產效能與火工作業安全(展覽會簡介詳附件 1)。
- 二、 本廠負責國軍各式武器彈藥研發及生產任務，計畫派員參加美國防衛協會舉辦之「2012 軍事武器裝備科技展覽會」，以瞭解現今各國最新軍品科技發展趨勢，配合軍需發展新式武器系統及彈藥。另蒐整、研討本次活動展示之生產作業機具設備與火工安全防護裝備，作為提升生產效能與安全作為參考。
- 三、 本報告將翔實說明本次行程所見與心得，完整呈現出訪見聞及資料蒐集成果，除展現研討收穫成效外，相關資料可作為後續系統開發及其他出國任務的參考。
- 四、 「IDGA 2012 軍事武器裝備科技展覽會」於 2012 年 10 月 1 日至 10 月 3 日於華盛頓州塔可瑪舉辦，各項出訪準備工作，詳述如下：
  - (一) 人員薦報：依「IDGA 2012 軍事武器裝備科技展覽會」展示主題，本廠選派具研發科技經驗及外語能力人員計 2 員，經核定由本廠副廠長劉大明上校率承參呂泳成上尉前往。
  - (二) 出國計畫：為周延各項出國工作，由本廠研設室擬訂出國計畫，規劃人員分工、經費運用及管辦期程等，俾據以執行。
  - (三) 議題蒐整：出訪前，由領隊劉大明上校與呂泳成上尉研討確認，聚焦於「彈藥及引信」、「火焰及爆炸防護」、「軍用載具」、「彈藥運輸防護及個人防護裝備」及「機槍及小型武器」等特定展品及展商研討，期於有限的時間內，獲致豐富的研討資訊及成果。



## 貳、 過程

### 一、 地點介紹

- (一) 本次「IDGA 2012 軍事武器裝備科技展覽會」於路易斯-麥科德聯合基地(Joint Base Lewis McChord)舉行，該基地位於華盛頓州塔科馬市東南方 14.6 公里，於 2010 年 2 月 1 日由美陸軍路易斯堡和美空軍麥科德 2 個基地，合併成爲一個聯合基地(基地徽章詳圖 1)。
- (二) 主要單位計有第 7 步兵師 2D 旅、第 2 步兵師 3D 旅、第 2 步兵師、第 2 步兵師第 4 旅、第 16 戰鬥航空旅、第 42 憲兵旅、第 62 醫療大隊、第 201 戰場偵監旅、第 555 工兵旅、亨利·林德士官學院、第一特種部隊群(空降)第 2 營第 75 遊騎兵團、第 66 航空司令部、第 160 特種作戰航空團(空降)、第 404 陸軍野戰支援旅第八大隊、陸軍青年司令部(ROTC)、第 191 步兵旅團、華盛頓地區飛行中心及西部地區醫務司令部等單位。
- (三) 該基地空軍部隊除平時備戰外，另負責人道主義空運任務，其中 C-17 運輸機擁有最大的運輸能量(C-17 執行任務實景詳圖 2)；本次參訪並於基地裡巧遇陸軍 CH47 運輸直升機執行飛行訓練(詳圖 3)。
- (四) 路易斯-麥科德聯合基地擁有超過 2 萬 5,000 名士兵、文職人員及超過 2 萬 9,000 名家庭成員居住於基地內，占地 8 萬 6,000 英畝(350 公里<sup>2</sup>)，擁有北美優質生活環境，原本一般民眾均可自由進入基地活動，並使用相關休閒設施(詳圖 4、5)，惟 911 恐怖事件發生後，爲了保護基地及官兵的安全，門禁管制變得相當森嚴，所有要進基地的人員，除須通過嚴格的辨證外，且必須由基地內 1 名持有 Authorized ID 卡的人員，至會客室擔保會客人員，始得核發通行證，會客人員才可進入基地。

### 二、通行證辦理紀實

成員於美國時間 101 年 9 月 30 日 1900 時抵達西雅圖塔可瑪國際機場後，隨即搭乘接駁車至租車公司(Dollar)完成汽車租賃，並駕車前往飯店，復於當日晚上 2130 時由領隊劉大明上校與呂泳成上尉於飯店研討任務與重點提示，會議於 2230 時結束；10 月 1 日 0900 時抵達路易斯-麥科德聯合基地會客中心(JBLM Lewis Main Post Entrance)辦理通行證，櫃台人員表示基於安全的規定，無法核發通行證給團員，

須依程序由基地內部人員至會客室擔保，方可核發通行證，領隊劉大明上校隨即與美國防衛協會承辦人員(辦公室位於紐約)聯繫，向其反映團員在會客室面臨的狀況，並表示在與會前一個月，已向該協會註冊，並取得進入展覽會場的確認回函，該協會並未先行通知我們該基地會客相關規定，該協會對我們深表歉意，並立即協助我們辦理通行證，隨後 1 位 Foster 小姐至會客室協助我們，直至 1330 時完成通行證申請及領取(會客證詳附件 2、3)，隨即前往會場(詳圖 6、7、8)，研討紀要及資料蒐集情形摘述如下：

### 三、研討內容及資料蒐整

(一) 10 月 1 日 1400 時與美國雷射技術公司(Laser Techniques)Daniel Bonnizzio 先生研討，討論事項及展品介紹如下(型錄詳附件 4)：

1. 該公司由詹姆斯和勞拉•多伊爾於 2001 年 1 月成立，總部設在華盛頓州雷德蒙市，主要任務為客戶以高度精密的測量和檢測，提供具有成本效益的解決方案，確保關鍵組件使用安全和延長使用壽命。
2. 雷射技術公司 (LTC) 提供雷射測量技術給世界各地的客戶，包含國防、航空，能源工業等。該公司特別專注於自動化、高解析度之雷射感測裝置，適用於特定客戶的需求，包含太空船推進器晶片 (Thruster chip of the space shuttle)及水下核蒸汽發電機管(underwater mapping of nuclear steam generator tube piping)檢測。該公司率先開發非接觸式雷射測量、檢驗和校準系統，已為政府和商業應用有 20 多年。
3. 針對該公司產品大口徑雷射檢測儀(詳圖 9、10、11)進行研討，可搭配 3 種不同大小的檢測感測器，可測量大口徑(105–155mm)(詳圖 10)、中口徑(20–76mm)(詳圖 12)及小口徑(5.56mm–0.45 Cal)(詳圖 13)之砲(槍)管內部加工狀況及各項數據的量測，設備特點及操作說明如后：

(1)設備特點：

- a.堅固耐用，便於攜帶的設計，可在野外使用
- b.砲口制退器於檢測過程中不必拆除(小口徑除外)
- c.自動化的檢測過程，減少人員操作及主觀的判斷誤差

- d.砲管侵蝕分析和雷射的三維測量(詳圖 14、15)
- e.可由電腦顯示砲管內部的三維影像(詳圖 16)
- f.提供砲管表面實際目測檢視圖像(詳圖 17)
- g.提供砲管內直度及曲度、膛線加工尺寸及表面腐蝕原因分析(詳圖 18、19)
- h.快速設置，自動校準程序
- i.基本規格：
  - (a)軸向掃描解析度：高達 0.1 毫米 (0.004 英寸)
  - (b)旋轉掃描解析度：高達 0.1 毫米 (0.004 英寸)
  - (c)感應器解析度：5 微米 (0.00025 英寸)
  - (d)感應器線性度：12 微米 (0.0005 英寸)
  - (e)雷射光功率：小於 4 毫瓦
  - (f)測試結果顯示：輪廓視圖和橫截面
  - (g)表面輪廓顯示 256 色

(2)操作說明：首先將移動器(詳圖 20)與雷射感測器(詳圖 21)組裝後(詳圖 22)，將其放入砲管中(詳圖 23)並接上接頭(詳圖 24)，且連接電腦(詳圖 25、26)，開始進行掃描，雷射感測器在砲管內作動情形，由模擬圖可以發現移動器往前移動(詳圖 27)，並推動雷射感測器向前，同時雷射感測器上的雷射燈向外投射並旋轉，記錄砲管內部的各項資料，感測器掃描至砲口時作動情形(詳圖 28、29)，完成掃描後由電腦分析各項數據，可以獲得砲管的三維圖(詳圖 30)，膛線加工的各项圖像及數據(詳圖 31、32)，膛線雷射錄影功能(詳圖 33)；另如發現內膛影像有異常狀況時，運用局部放大功能檢視表面加工情形(詳圖 34、35、36)

(二) 1550 時與美國海灣海岸過濾器公司(Gulf Coast Filter,INC) Jerry D. Sims 小姐研討(詳圖 37)，研討該公司主要產品過濾器 (型錄詳附件 5)：

該公司在過濾產業擁有超過 30 年的製造銷售經驗，主要產品為機油濾清器、燃油過濾器、水分離器、液壓過濾器及美軍訂製的各種過濾系統，其過濾器已經美國航空航天局、北卡羅萊納州海洋運輸及美空軍等使用單位測試通過，並定位為過濾產品市場中不二選擇，該公司產品主要可以延長發動機壽命及延長換油間

隔，其秘密僅是保持油品與新油一樣品質。不論車輛或船艦內部都有過濾器，但設計均係以較高速度及流量進行過濾，無法將微粒子濾出。酸是導致油品變質的主要因素，主要是由水引起，本產品可於 2 品脫的流量中，將微粒子及水分濾出。重要的客戶之一，百事可樂車隊已經使用該公司過濾器超過 20 年，其車隊獲得較平均更長的引擎壽命。在墨西哥灣沿岸車輛使用的過濾器中，我們延長客戶 70 % 的平均換油時間。以卡車為例來說，卡車營運商平均花費超過 200 美元，在更換機油費用上，如果花費約 45 美元加裝過濾器，5 年後可以節省超過 4,200 美元換油的費用，約可節省超過 70% 的機油更換費用(過濾裝備詳圖 38，濾筒及濾心詳圖 39、40)。

(三) 10 月 2 日 1000 時由路易斯-麥科德聯合基地 Chris Hodges 上校發表演講，演講題目為：路易斯-麥科德聯合基地未來的成長，摘要如后：

1. 路易斯-麥科德聯合基地裡寬廣的街道及美麗的環境，並與臨近的社區互相連接，可以用步行的方式到達，即是所謂的“可延伸性”，此為基地對未來的憧憬，並為領導人對基地內官兵及眷屬的承諾，確保他們有一個更美好的明天。
2. Chris Hodges 上校指出「資源保護」是非常重要的部分，也就是保護我們的環境，亦是駐軍的核心任務之一，對基地的可持續性的重視，即反映在關心我們的環境和社區，即使訓練負荷增加及投入更多的機動部隊。
3. 基地所制定的環境改善計畫，已於多次會議中研討，包括環保、能源及基礎設施等議題，因為良好的環境將影響官兵及居民的健康，直接攸關士兵的福祉。此打破了一般城市擴張的規劃模式，並不是利用更多的土地和自然資源，凝聚社會各階層，而是設法使用較少的基礎建設，讓居住在這社區的家庭，能有更好的生活品質，更適合居住的環境。
4. 基地要達到永續經營的理念，維持良好居住品質及任務的遂行，仍須依靠後續領導階層的繼續努力及重視，並且仰賴社區成員的支持，在持續發展中，不斷力求創新及進步，此為永續的發展目標。

(四) 1040 時與美國 Emergency/ Triage Lights 公司 Juan Cienfuegos 先生研討(攤位詳圖 41)，研討內容如后(型錄詳附件 6)：

1. 緊急分類 LED 燈(Emergency/ Triage Lights)產品的開發，係爲了方便醫務人員於夜晚及惡劣條件下，能夠快速及方便地將受傷的官兵，作緊急的醫療分類。過去軍醫必須攜帶四種不同的化學燈袋，以針對士兵受傷嚴重性，用燈袋作分類，浪費大量時間，且攜帶裝備極不便利，因此醫療分類 4 色 LED 燈就此誕生了。該產品使用簡單，攜帶方便，可重複，非常適合夜間環境，尤其在大規模人員傷亡的事故中。
2. 該產品另外一項的應用是用於災區，用來傳達自己的位置，每次災難後現場，人們能做的就是大聲呼喊，現在可使用 LED 燈標記親人的位置。兒童標爲紅色，婦女標爲綠色，男人標爲藍色，甚至以黃色標記寵物。災難倖存者只要按一下 E / T 指示燈便開始閃爍，即使於夜間，救援狀況不佳的情況下，也可使救援團隊，清楚明確得知待救者的位置。即使人員不幸罹難，也可以更容易地發現他們。
3. 經與廠商研討，LED 燈除了四種顏色外，亦有固定及閃爍兩種模式，可增加標註的方式，並予以廣泛的應用，該公司也積極開發，軍事以外的用途。緊急分類 LED 燈，側面有一個按鈕，可以變換燈的顏色及變換閃爍燈，底部有強力磁鐵，可以吸附在感磁的材質上，非常的便利的設計(詳圖 42)。

(五) 1120 時與美國 RP Advanced Mobile System 公司 Ahti Loukojarvi 先生研討，該公司在軍事方面主要設計及生產先進的軍事戰術越野車輛及各種車輛的配件，以供售美軍及盟軍；另研討內容如下(型錄詳附件 7)：

1. **StrikeRazor** 越野車 (詳圖 43、44、45、46)：該車輛已經在特種部隊、美國海關和邊境巡邏單位中服役，係一全地形車設計的戰術車輛，重量僅有 1600 磅，800cc 雙缸四行程引擎，即可提供足夠的動力，並以高達 60 英里的高速執行任務。**StrikeRazor** 提供全輪驅動系統及高/低 CVT 變速器，達成敏捷及力量的完美平衡。另配備了車輛性能調校的懸吊系統、鋁合金輪圈、性能優越的全地形跑胎，車輛具有保護性的防滾架，最重要的是可搭載各種不同的武器系統，包括各式機槍及榴彈槍等。在空中運輸方面，**StrikeRazors** 擁有最小的尺寸，幾乎所有的運輸機均可以運輸該車輛，這些功能使 **StrikeRazor** 成爲特種作戰任務中的完美

工具。

2. 越野戰術輪胎(詳圖 47)：最初設計使用於特種部隊及執法戰鬥單位，經過廣泛的開發與測試後，現在可用於一般運輸工具。其輪胎紋路的設計特殊，使得它在許多環境中，保有一定的抓地力，同時減少對駕駛員的反作用力。創新的 8 層和 12 層的橡膠設計及獨特的胎面花紋提供充分的保護，其輕量化的結構，降低了運行負載，不增加引擎的負擔，保有車輛加速性。

(六) 1300 時與美國 Eclipse 公司 Rory Berger 先生(詳圖 48)研討，研討之品項如后(型錄詳附件 8)：

1. 變速氣動式發射器(Variable Velocity Pneumatic Launcher)(詳附圖 49)：是一種可使用氣體調整射速，40mm 口徑之 6 發轉輪式榴彈發射器，不含彈葯重量為 9.45 磅，射速為每秒 2 發。該發射器結合使用凸輪裝置，擊發後驅動彈艙旋轉，以達到自動給彈的功能。另本裝備運用於鎮暴驅離作業，有效嚇阻，藉由調整槍握把上方的速度調節桿(詳圖 50)，控制空氣量，視目標遠近彈性調整彈葯初速，規格說明如下：

(1)槍口速度可於 100-600fps 間調整

(2)不產生煙塵及砲口焰

(3)低噪音

(4)射速每秒 2 發

2. 橡膠彈及漆彈(40mm Rubber Bullets and Paintball)：可利用氣體控制調整彈藥發射速度，如果槍支使用的主要目的，在於嚇阻暴動民眾，或是海上來犯的外國漁民，不進行實際人員殺傷，使用 40mm 實彈的價格昂貴，故該公司為了替客戶節省成本，設計橡膠彈及漆彈(詳圖 51)，搭配槍速調整裝置，成為非致命殺傷的武器，並達有效嚇阻的目的，且符合經濟效益。

(七) 1440 時與美國 Sprung 公司 Troy Lawrence 先生研討(詳圖 52)，就移動式建築(Sprung Instant Structures) 研討 (型錄詳附件 9)，內容說明如后：

1. 該公司表示移動式建築已經在超過 90 個國家和地區銷售及使用，該項應力結構亦獲得專利，成為一種可取代傳統建築的方式，於過去 35 年間已經建立了超過

12,000 結構的應用，其中包括體育、遊戲、庫儲、軍事哨所及辦公空間等不同的目的(詳圖 53、54)。該項技術提供堅固耐用的建築結構，並承受最極端嚴酷的環境，更重要的是，這結構可以拆卸和重新使用，擴展或重新配置。本產品通過 ISO 9001:2008 認證。

2. 經與該公司人員研討後，表示這個移動式建築，美軍買了相當多的數量，原因除了堅固、可移動式等特點外，最重要的是，每一片布均內含玻璃纖維，可以在任的嚴峻的環境下(極冷或極熱)，隔絕極高及極低的溫度，保護建築物內的人員，骨架使用非腐蝕鋁製架，確保彈性和長久使用性，當時美軍在對伊拉克打仗時，使用了相當多的數量。

(八) 1600 時與美國 Sprint 公司 Casey Muilenburg 先生研討，研討事項及產品介紹如下(型錄詳附件 10)：

1. 該公司主要是提供消費者、企業和政府全方面無線和有線通信服務。該公司專注於開發、設計和部署創新通信技術，也是第一個在美國提供無線的 4G 服務，在美國客戶滿意度指數相當高，在美國 47 個行業中，過去的四年裡以 Sprint 公司營運排名第 1。並且在新聞周刊中，2011 年綠色排行榜排名衝刺至第 3，將其列為國家的環保企業之一。
2. 此次研討項目為一種概念，是一種在緊急特殊的情況下，如火災、地震及爆炸等狀況下，在手機及無線電均無法提供通訊時，該公司提供緊急使用的特殊手機(可針對客戶需求客製化手機)，供救難人員間，聯繫及網路使用，Muilenburg 先生表示圖片中的箱子(詳附圖 55)，只是展出一個概念，箱子將隨著客戶需求的手機形式及數量進行調整。當然也可以在執行特殊任務或軍事行動時，配給特種部隊或一般部隊官兵使用，提供適時的緊急聯繫，確保執行任務的通聯需求。

(九) 10 月 3 日 1000 時與美國 Advatech Pacific 公司 Dale Newton 先生研討，研討事項如下(型錄詳附件 11)：

1. 該公司是一個全方位開發的公司，專門從事航空和國防領域的產品，於 1995 年建立後，該公司不斷創新及開發，以滿足國內外客戶與日俱增的需求，也因為

如此，各種廣泛的知識基礎已建立在公司的開發人員中，使 Advatech 於每一個案件中，總是能超過客戶需求與想像。多年來 Advatech 曾與美國航空局、美海軍、美空軍、美陸戰隊、COLSA 公司、波音及加拿大通用動力公司等知名單位研究開發不同的產品。該公司的使命致力於單兵戰術跨領域解決方案、仿真的模擬軟體訓練、透過高級工程技術技能、專業的技術開發和生產及企業和學術界的合作等實際解決問題。

2. 研討 TACDS 通訊裝備(Tactical Cross Domain Solution)(詳附圖 56、57)，它具有重量輕，雙向通訊等優勢，HIGH SIDE 部分可連接指揮中心，與指揮中心做聯繫，LOW SIDE 部分可以與攻擊部隊作聯繫，無線電的部分可與單兵做聯繫，特點是它的訊息傳輸都經過特殊的加密方式，敵人即使攔訊內容，也無法取得資料內容，並且可以選擇訊息分享模式，可選擇全部共享，或指定傳給某一單位，有多種傳輸模式來做單向或雙向的訊息傳遞。TACDS 提供了使用安全，並實現了無縫的戰術數據通信。本產品具尺寸小、低重量和功率低、堅固及防篡改編碼器等特點，使其成為理想的戰術通訊裝備。TACDS 已經由國家安全局 (NSA) 及美國海軍陸戰隊司令部通過認證使用。

(十) 1050 時與美國 CAPCO 公司 Grand Junction 先生研討，研討該公司之 Advanced T&E Mechanism (詳圖 58、59)，它是一個整合武器系統與車輛的機械結構，能夠提供射手靈活的移動，瞄準目標後，可以鎖定武器系統射擊姿態，以電擊發方式連續射擊，此時射手可以尋求掩蔽，減少由側面及後方攻擊的風險，增加人員戰場存活率；另火炮固定時可實施迴旋方位及俯仰角度微調(型錄詳附件 12)。

(十一) 1300 時由美國戰術攻擊裝備公司(Tactical Assault Gear) Julie Kammerer 先生提供該公司之產品型錄詳附件 13，Julie Kammerer 先生介紹該公司主要生產各式各樣的防彈背心、背包及服裝等裝備，本次在會場主要展出各式各樣的戰術背心(詳附圖 60、61、62、63、64、65)，經與該公司人員研討後，可以依實際戰場需求，由該公司進行客製化生產，如改變或增加彈匣袋位置或數量等需求。

(十二) 1350 時與美國愛國者太陽能集團公司 (Patriot Solar Group) Sam Jaquette 先生研討，太陽能發電設備(型錄詳附件 14)主要分為固定式及移動式，系統設計及製造



均在美國國內，銷售點遍佈全球。愛國者太陽能集團提供了高性能且穩定的發電與較低的生產成本，同時提供了高可靠性，其固定式發電設備系統產品結構中，均由雙面鍍鋅鋼板組成，兼顧堅固及耐用雙重特點，可負荷超過每小時 100 英里的風速，以確保在最嚴苛的環境下仍可正常發揮發電功能；另該公司展出產品如下：

1. 水平單軸太陽追蹤發電器(Single-Axis Tracker) (詳圖 66)：本裝置屬固裝式，面板可隨著太陽的移動，自動調整面板角度，以達最高的發電效能，較固定式面板增加高達 35%以上之生產率。本產品結構堅固耐用且易於安裝，幾乎於任何環境下均可迅速完成裝設。每塊面板可發出 10 到 1000 千瓦的電量，該公司並保證機械結構部分 10 年內不損壞。
2. SP 系列(SOLAR PANELS)太陽能電池發電板(詳圖 67、68、69、70、71)：本裝置屬移動式，提供單兵於野外作戰時，持續使用相關電子設備，電池發電板完全防水，提供安靜及可靠的發電，可產生 6W，12W 和 30W 等 3 種功率，並可於海洋和陸上交通時，提供緊急使用電源，供給船艦、車輛、急救車或其他特種車輛使用。本發電板係由牢不可破的塑料薄膜表面與半柔性鋁板的支持，使這些面板可以放置於任何不平的物體上，包含圓弧的岩石，其面板連接充電控制器，可視需要調整輸出功率，不使用時，折疊收納後易於攜帶，並提供 20 年輸出功率保證，1-10 年達 90%以上，11-20 年達 80%以上，並提供 2 年材料保固。

(十三) 1535 時與美國 Star 4D 公司 Rick Klein 先生研討，針對噴漆訓練模擬器(詳圖 72)進行討論，內容說明如后(型錄詳附件 15)：

1. 該模擬器是一套噴漆訓練系統，可以模擬實際噴漆的狀況，裝備為雷射手把、螢幕感應器及模擬軟體等，經由團員實際操作後，透過軟體的分析，螢幕可以顯示那些部分是重複噴塗的部分，哪些是噴太重的部分，都可以顯示出來，經過軟體的分析後，可以知道浪費漆料多少，接著再重新模擬一次，噴漆的情況已經大幅改善，廠商表示透過這個軟體的訓練 3 小時，可以使新手快速習得噴漆技巧。

2. 這套軟體已於許多美軍基地裡試行了許久，該公司也會視需求派員去基地為美軍上課，整體下來除了節省漆料，節省裝備噴塗的時間，當然也節省了開銷及人力負荷，提高裝備噴塗的效率。

(十四) 1635 時與美國 HECKLER & KOCH 公司人員研討，研討事項及介紹如下(型錄詳附件 16)：

1. 該公司在過去的半個世紀中，一直是致力於生產及設計執法人員和世界各地的軍隊所需求的輕型武器，也是體育和商業市場首屈一指的槍支品牌製造商，使他以質量、創新及安全等優勢聞名，也期許其成為世界上最大的小型武器系統製造公司。
2. 該公司企業理念的核心，是從一切的基礎做起，追求卓越的承諾是堅定不移的，這是屹立不搖的因素及義務，並認為這是一個基本義務，將可以為客戶提供最好的產品。
3. 手槍部分：
  - (1)HK45 手槍(詳圖 73)：口徑.45ACP、全長 191mm、槍管長 115mm、重量 880g
  - (2)P30 手槍(詳圖 74)：口徑 9mm、全長 177.5mm、槍管長 98mm、重量 740g
  - (3)P2000(詳圖 75)：口徑 9mm、全長 173mm、槍管長 93mm、重量 700g
  - (4)上述展出之槍支，均有下列幾項特點：
    - a. 可調整握把尺寸，更符合人體工學設計，和更靈巧的控制 (詳附圖 76、77)。
    - b. 使用精確的滑動鎖定、最佳精度及獨有的 O-型環，且槍管是由著名的冷錘鍛造工藝所製造，採多邊形膛線槍管設計，使壽命更長和更好的精度。
    - c. 它利用獨特的內部機械後座力減少系統，可降低高達 30%的武器射擊後座力，提高射擊控制和增加組件的使用壽命。
    - d. 通過使用模塊化的設計，可以簡單地改變零件，將控制桿的功能，從左側到右側切換，以適應慣用左手射手。
4. HK169 榴彈發射器(Grenade Launchers)(詳圖 81)係用來發射 40mm 高爆彈(HE)及穿甲彈(AP)等彈種，槍管採鉛料製造，重量輕及構造簡單，槍托為可折疊式，折疊及固定方式由附圖說明(詳圖 78、79、80、81、82)，HK169 榴彈發射

器可作為一個獨立的發射器，也可與 HK416，HK417 步槍等武器相結合，結合方式係運用類似插銷固定的方式結合(詳圖 83、84、85)，這款榴彈發射器，除了前兩項特點外，它可以單獨成為發射器外，亦可結合步槍使用，增加本發射器使用多元性。

## 參、心得及建議

### 一、心得

藉由本次出國研討、蒐獲之型錄等資料，可瞭解美軍基地他們實際的作戰需求及使用的裝備，同時反映出先進國家作戰思維及武器發展趨勢，綜合檢討本廠研發生產核心能量，進行研析與檢討，相關心得摘要如次：

- (一) 大型火炮製造為本廠主要生產任務之一，其中砲管製造列屬核心能量，惟目前砲管完成加工後，係以樣板量規套量砲管加工尺寸，並以傳統攝影拍照方式實施砲管內壁檢測(詳圖 86)，無法精確量測砲管內部各處陰、陽膛線之實際加工尺寸，本次雷射技術公司所提供的雷射檢測儀，屬於非接觸式雷射測量儀器，不僅可以檢視砲管內膛影像、砲管直度及曲度、膛線加工尺寸及三維圖像檢視等資料，亦可提升本廠對砲管內徑陰陽膛線量測的品質水準，對於砲管射擊後的磨耗也可精確量測，以決定砲管的壽限及可靠度設計，並有效提升火炮產品品質，減少檢驗成本及失效成本，間接降低售後服務成本；另其測量操作方式簡易，測量結果精準，且裝備為可攜式，不論生產及游修檢測均可使用，本廠後續將根據廠商型錄內容，針對設備規格、量測效益及價格等多方面進行評估後，再行檢討納入後續檢測設備採購規劃參考。
- (二) 本廠砲塔所係執行火炮零附件塗裝工作，新進人員到所後，雖由所長及領班，實施勤前教育訓練，惟後續仍須由實作中學習並逐步累積經驗；此次蒐獲 Star 4D 公司提供的噴漆模擬訓練軟體，經實際操作模擬後，訪團成員深刻體認，若能利用模擬訓練方式模擬噴漆作業，對噴漆的要領掌握，能更加深印象，縮短學習曲線，新手也可以很快的進入狀況，免除零附件重新噴塗及降低重工情形並提高生產效率，本廠後續將案內模擬軟體，納入研究參考，俾利持續精進產品品質。
- (三) 美軍因曾投入世界各地參與無數次大小的戰役，以往的實戰經驗，讓他們知道在嚴峻的環境下，需要甚麼裝備幫助他們在該等環境中，能順利存活並完成任務，所以

從會場中蒐獲的「太陽能電池發電板」、「StrikeRazor 越野車」及「Sprung 移動式建築」等品項資訊，可以得知這些產品是為適應嚴苛環境，所衍生的產品，說明如下：

1. 「太陽能電池發電板」：在一望無際的沙漠戰場中，若無可靠電力來源可供使用，通信裝備將無法持續發揮效用，因此能夠即時穩定地提供裝備電源，是非常重要的，此外，不僅是通信裝備需要電源，許多電腦及網路設備都需要電源，尤其當需要長時間為攻擊發起準備，而油料運補又難以抵達時，此為一項不可或缺的產品；軍用電池生產係屬第 204 廠責任產品，目前尚無使用太陽能發電之裝備，因應綠色節能政策，產品型錄提供第 204 廠納入研發規劃參考(同附件 14)。
  2. 「StrikeRazor 越野車」：因為有了實際戰場經驗，許多重型車輛在路況不佳，如泥濘及泥沙淤積的地方，均無法順利提供人員移動能力，火力無法發揮，人員無法即時掩蔽，將大幅降低人員戰場存活率，但如果有越野車的使用，即可克服嚴苛的地形，為兩軍對戰時提供強大的移動力，其體積小的優勢，可由任何運輸機運投射至世界各個角落，提供前線部隊使用。目前第 209 廠負責八輪甲車及國軍相關戰甲車輛的研發生產，蒐獲之產品型錄提供第 209 廠，作為相關車輛研發改進參考(同附件 7)。
  3. 「Sprung 移動式建築」：要在惡劣的天候及環境下，且經過長時間的戰鬥，人員居住、裝備存放、裝備維修及伙食準備等，這些都需要有堅固的建築設施，且能夠隔絕嚴寒及炎熱的氣候，給予人員最佳的防護，這些在 Sprung 的產品中都將可以實現，並且經美軍的實戰經驗中驗證，這項產品有相當大的用途。
- (四) 海灣海岸過濾器公司的產品能將油內的雜質及水份濾出，始油品保持跟新換的一樣，延長車輛換油週期，提升裝備使用年限，節省了許多的成本及延長裝備使用年限，在美國民間公司或是軍方已普遍使用，目前國內部隊並未使用此類的過濾器，而且台灣氣候較潮濕，如果使用該項裝備，應可節省大量的油品耗損及延長裝備使用年限，案內產品型錄將提供相關後勤單位參考運用。
- (五) HK45、P30 及 P2000 手槍部分，其可調整式握把、獨有的 O 型環設計及模組化設計等特點，已成為輕兵器發展的主流；HK169 榴彈發射器，可單獨使用亦可組裝於步槍之兩用方式，提供裝備使用多元性；40mm 變速氣動式轉輪發射器，特有的可調整射速的功能，前述手槍、榴彈發射器及轉輪發射器，現有國內尚無此類設計，產

品型錄提供第 205 廠，做為後續研製參考，以利研發或提升現有輕兵器的效能(同附件 8、16)；另 40mm 變速氣動式轉輪發射器之「橡膠彈及漆彈」，係屬非致命殺傷的武器，本廠目前尚未針對此類產品進行開發，後續將納入相關彈藥研製參考。

(六) CAPCO 公司 Advanced T&E Mechanism 是一個整合武器系統與車輛的機械結構，能夠提供射手靈活的搜索並瞄準目標，亦可鎖定武器姿態，以電擊發方式連續射擊，目前第 205 廠生產 T75M 20mm 機砲係裝配於悍馬車上，供海軍陸戰隊使用，其結合機構除了迴旋部分每 15 度有一個定位點外，俯仰角度均為人員操作，無鎖定裝置，產品型錄提供第 205 廠作為後續研改參考(同附件 12)。

(七) 美國 Emergency/ Triage Lights 公司緊急分類 LED 燈(Emergency/ Triage Lights) 產品的開發，係為了方便醫務人員於夜晚及惡劣條件下，能夠快速及方便地將受傷的官兵，進行緊急的醫療分類，作為後續增援部隊抵達現場後快速辨識及緊急救護使用，亦可用於災難現場，運用燈光標示傷患位置，目前國內並無此類產品開發，相關產品型錄提供第 402 廠，作為光電類產品研製參考運用(同附件 6)。

## 二、建議

- (一) 鑑於往年行程地點均於國外一般民間機關舉行，惟此次展覽會係本廠首次赴美軍基地內參與，相關美軍基地會客規定並不熟悉，建議後續相關單位如參加國外類似行程時，地點如於軍事基地內，應先與承辦單位聯繫，確認相關會客程序及要求，將使行程更加順遂。
- (二) 本次出國期間前後計 3 天，由於事前準備及規劃縝密妥適，故過程順利，收穫豐富，各項任務均圓滿達成，所蒐集之型錄及研討內容可供本廠、204 廠、205 廠、209 廠及第 402 廠參考；另透過此次行程可增加人員交流及擴大研發及產製人員能見度，建議往後國外類似行程地點選定，可以朝大規模及全球性之會議著手，除展示產品多元外，亦有各國相同產品可以供參考及比較，可以使出國人員收穫更加豐富。

## 肆、附錄

- 一、研討紀實：如圖 1~86
- 二、資料蒐整：如附件 1~16



圖 1 路易斯-麥科德聯合基地徽章



圖 2 C17 運輸機執行裝載任務畫面





圖 3 CH47 運輸執行機執行訓練畫面



圖 4 基地內休閒設施





圖 5 基地內休閒設施



圖 6 會場入口留影



圖 7 會場入口留影

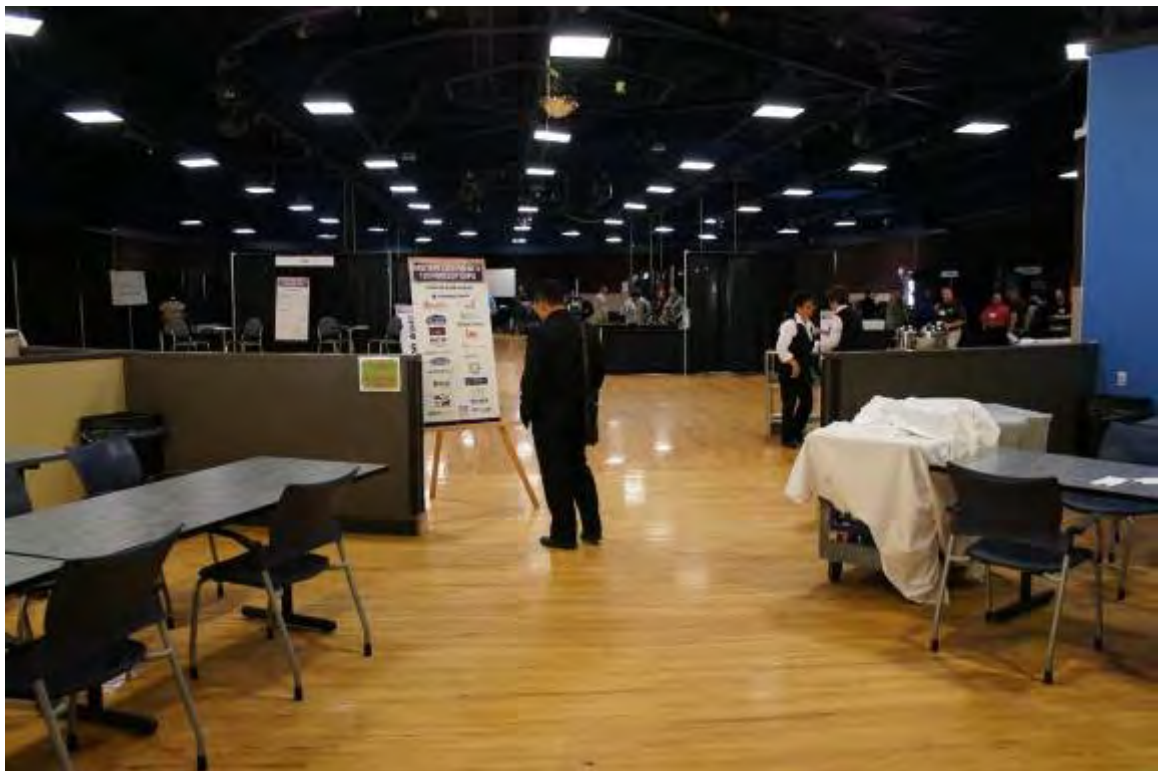


圖 8 會場





圖 9 雷射檢測儀



圖 10 雷射感測器



圖 11 檢測儀電腦

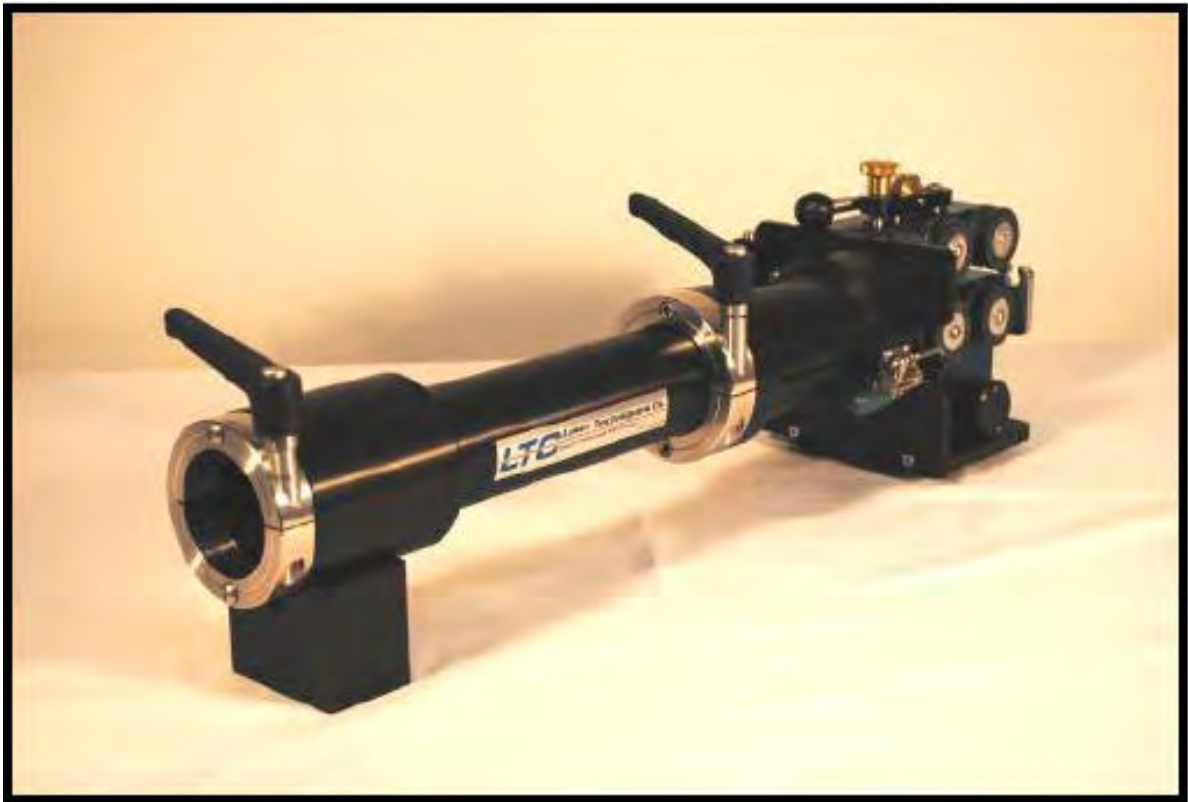


圖 12 20mm-76mm 中口徑雷射感測器



圖 13 5.56mm-0.45Cal 小口徑雷射感測器

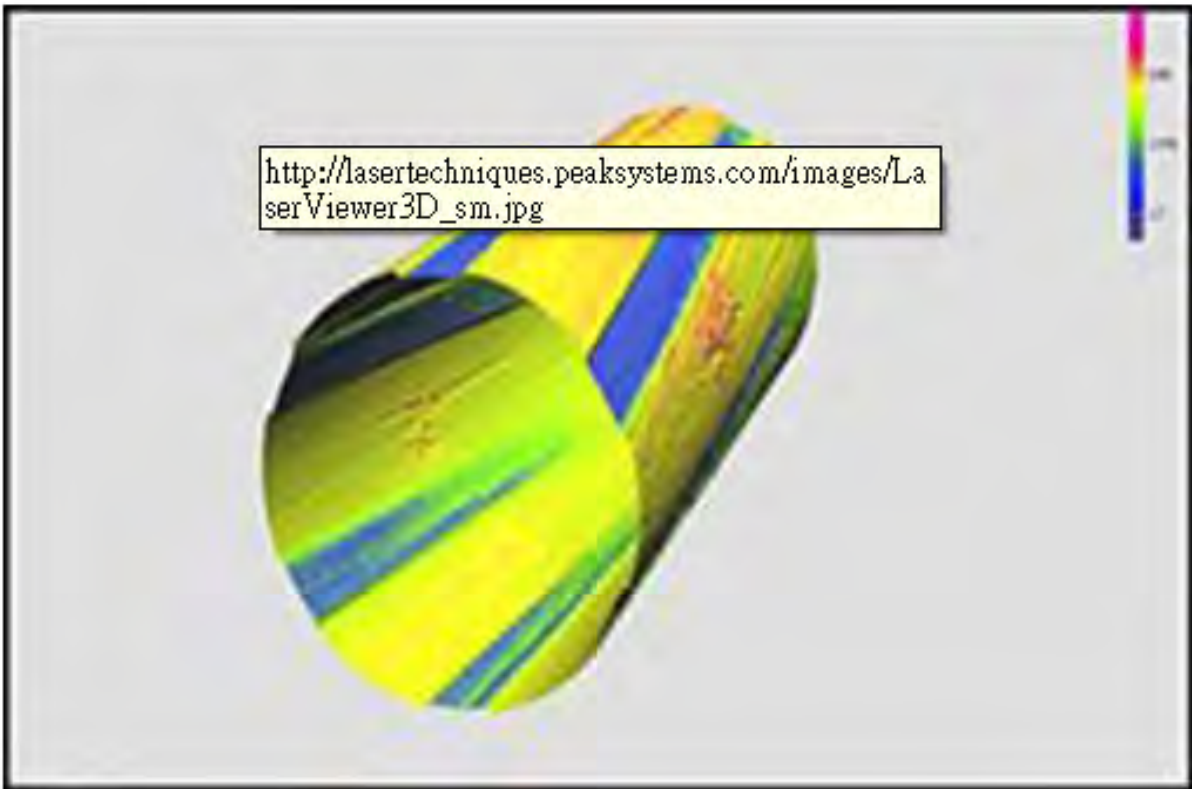


圖 14 砲管三維測量圖



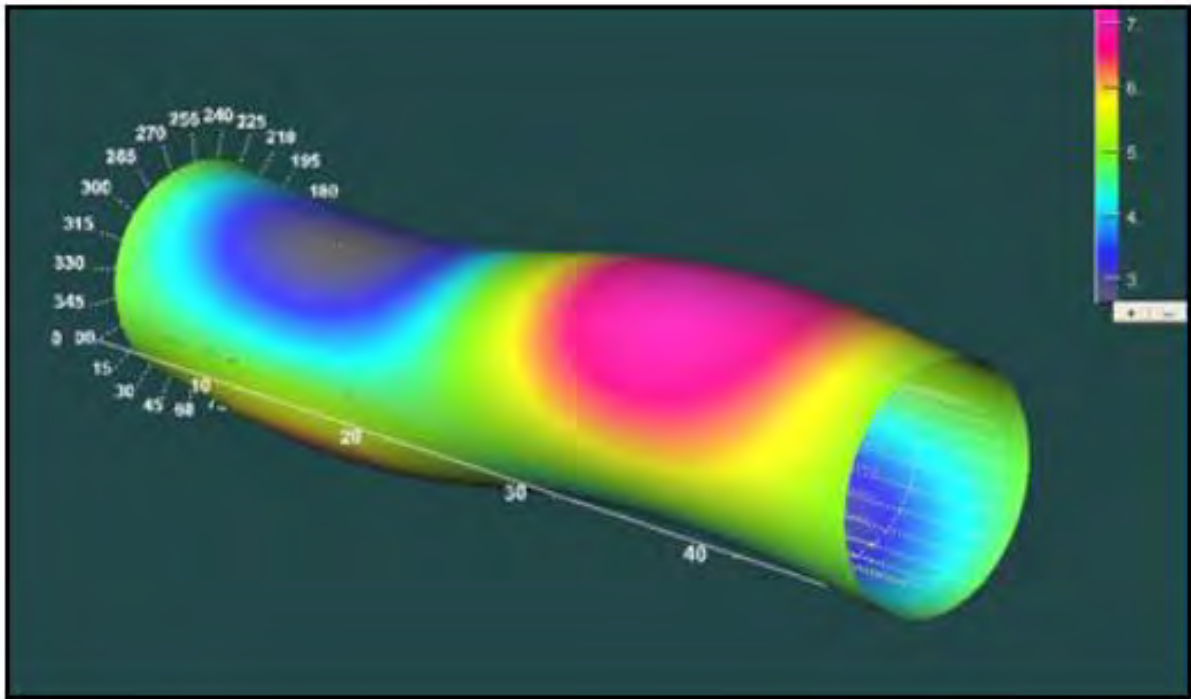


圖 15 砲管曲度顯示圖(顏色較深部分表示為砲管直度不佳處)

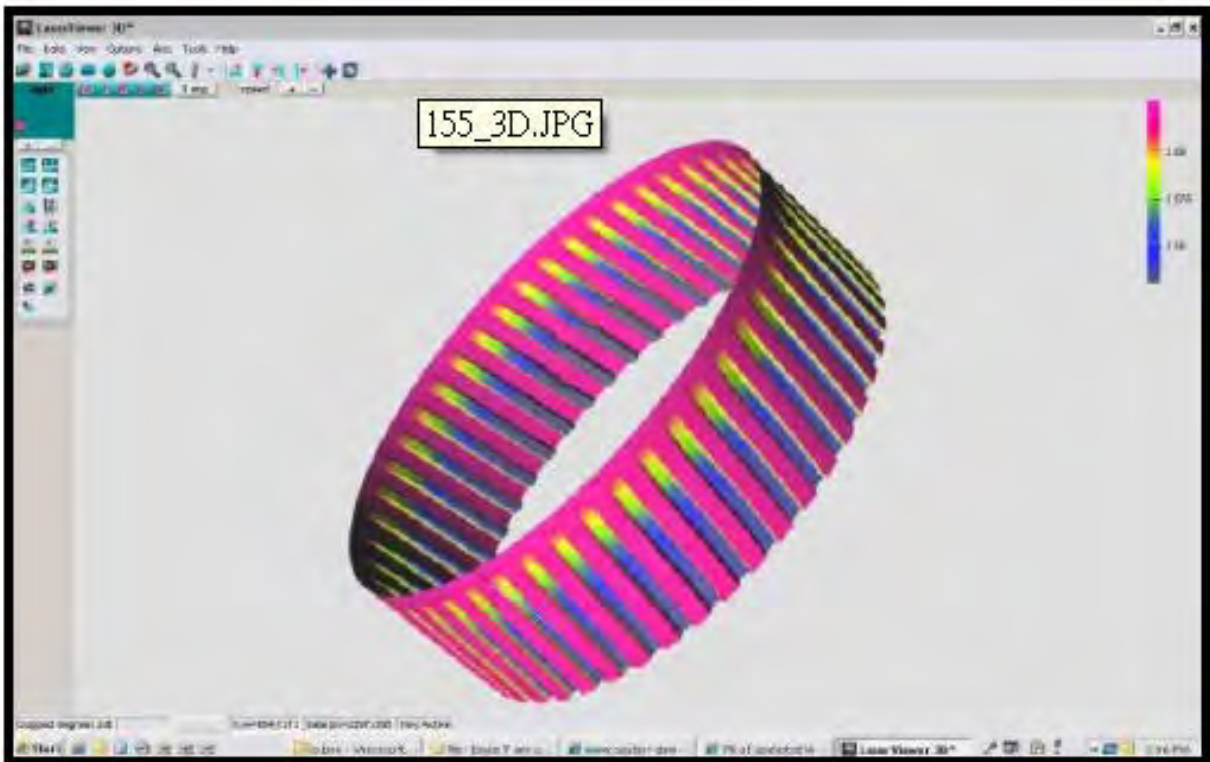


圖 16 砲管三維顯示圖

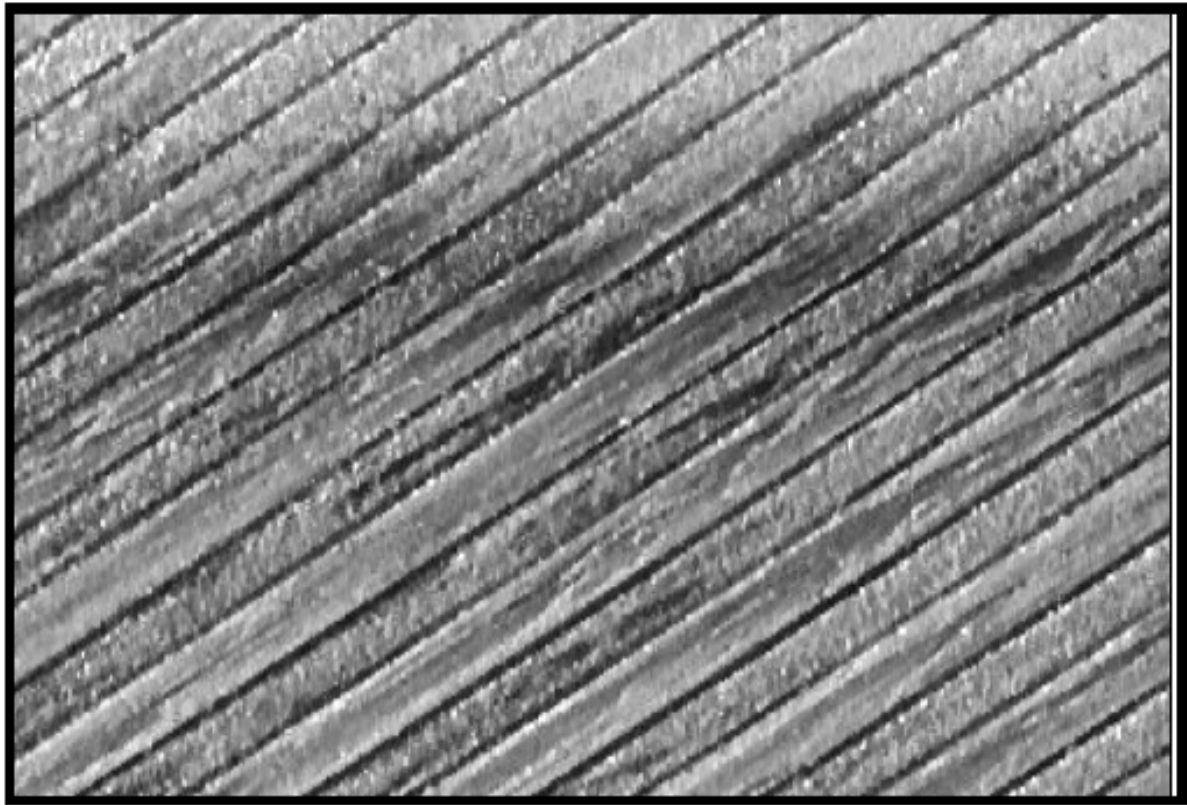


圖 17 砲管表面顯示圖

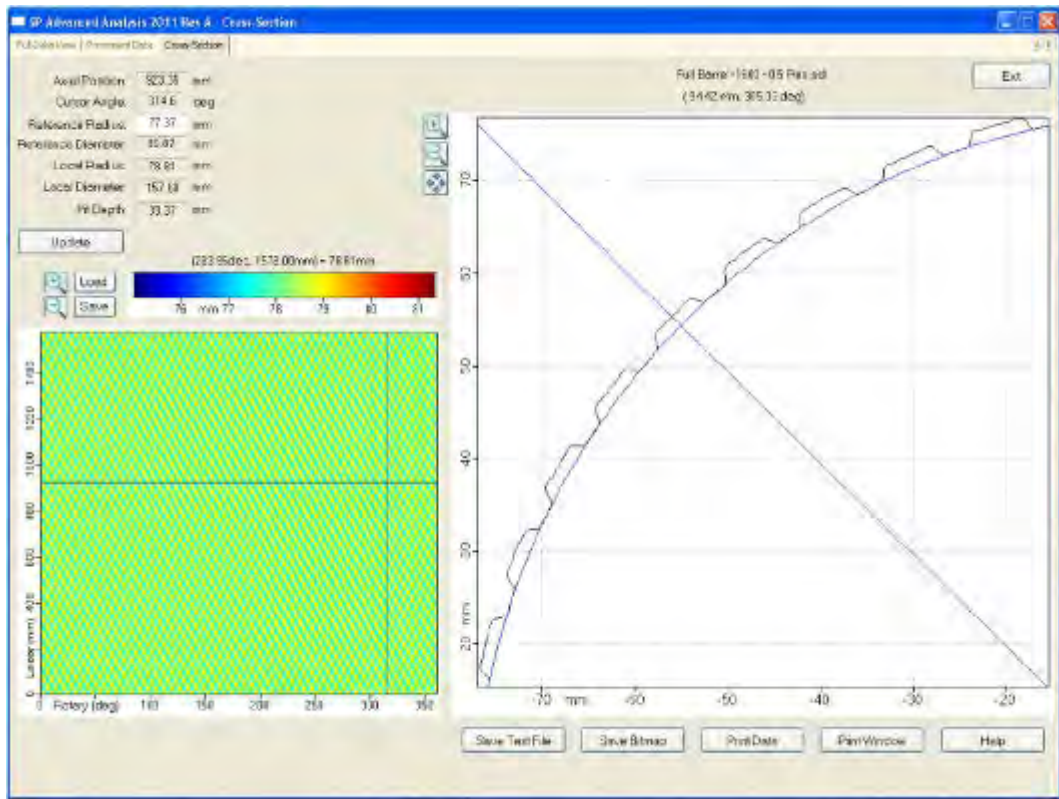


圖 18 某深度膛線尺寸測量數據

**LABORATORY SERVICES BRANCH TEST REPORT**

DATE OF MEASUREMENT: 18/10/2012 12:58:08 PM  
 OPERATOR: John Dow  
 BARREL TYPE: M2 40 Caliber  
 SERIAL NUMBER: KYZ-123  
 NUMBER OF ROUNDS: 100  
 MEASUREMENT TEMP: 82 deg F  
 TEST PROGRAM:  
 TEST DIRECTOR:  
 SCAN DATA FILENAME: D:  
 SCAN DATA ANGULAR RESOLUTION: 0.3 deg  
 APPROXIMATE CIRCUMFERENTIAL SAMPLE SPACING: 0.002 in  
 SCAN DATA AXIAL RESOLUTION: 0.02 in  
 REPORT AXIAL RESOLUTION: 0.5 in  
 NUMBER OF LAND SAMPLES PER CALCULATION: 16  
 NUMBER OF GROOVE SAMPLES PER CALCULATION: 31  
 REPORT GENERATED ON: 1/30/2014  
 NOTE: Land 1 is the first land above 0 degrees at the muzzle end.

**COMMENTS:**

Diameter	Land	Groove	Land	Groove	Land	Groove	Land	Groove	Land	Groove	Average	Average
Measure	NO	IN	IN	IN	IN	IN	IN	IN	IN	IN	Land	Groove
0.5	-28.22	0.4980	0.5080	0.4985	0.5090	0.4975	0.5095	0.4970	0.5090	0.4965	0.5095	0.5088
1	-28.72	0.4940	0.5080	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5084
1.5	-29.22	0.4955	0.5085	0.4980	0.5090	0.4980	0.5090	0.4980	0.5090	0.4980	0.5090	0.5089
2	-29.72	0.4955	0.5080	0.4985	0.5090	0.4985	0.5090	0.4985	0.5090	0.4985	0.5090	0.5088
2.5	-30.22	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5082
3	-30.72	0.4985	0.5090	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5083
3.5	-31.22	0.4985	0.5080	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5084
4	-31.72	0.4985	0.5090	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5083
4.5	-32.22	0.4985	0.5085	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5083
5	-32.72	0.4985	0.5085	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5084
5.5	-33.22	0.4985	0.5085	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5084
6	-33.72	0.4985	0.5085	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5084
6.5	-34.22	0.4985	0.5085	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5084
7	-34.72	0.4985	0.5085	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5084
7.5	-35.22	0.4985	0.5085	0.4980	0.5085	0.4985	0.5085	0.4985	0.5085	0.4985	0.5085	0.5084
8	-35.72	0.4970	0.5085	0.4975	0.5085	0.4975	0.5085	0.4975	0.5085	0.4975	0.5085	0.5082
8.5	-36.22	0.4970	0.5080	0.4980	0.5085	0.4980	0.5085	0.4980	0.5085	0.4980	0.5085	0.5083
9	-36.72	0.4975	0.5085	0.4980	0.5085	0.4975	0.5085	0.4975	0.5085	0.4975	0.5085	0.5083
9.5	-37.22	0.4985	0.5085	0.4975	0.5085	0.4975	0.5085	0.4975	0.5085	0.4975	0.5085	0.5088
10	-37.72	0.4985	0.5100	0.4980	0.5105	0.4975	0.5100	0.4975	0.5100	0.4975	0.5100	0.5100
10.5	-38.22	0.4980	0.5105	0.4980	0.5105	0.4975	0.5100	0.4975	0.5100	0.4975	0.5100	0.5102
11	-38.72	0.4980	0.5105	0.4975	0.5110	0.4975	0.5100	0.4980	0.5100	0.4975	0.5100	0.5103
11.5	-39.22	0.4985	0.5110	0.4980	0.5110	0.4975	0.5100	0.4980	0.5100	0.4980	0.5100	0.5104
12	-39.72	0.4985	0.5110	0.4975	0.5105	0.4980	0.5100	0.4985	0.5110	0.4980	0.5100	0.5108
12.5	-40.22	0.4985	0.5110	0.4980	0.5105	0.4980	0.5100	0.4985	0.5110	0.4980	0.5100	0.5106
13	-40.72	0.4985	0.5110	0.4985	0.5105	0.4985	0.5100	0.4980	0.5110	0.4985	0.5100	0.5106
13.5	-41.22	0.4985	0.5110	0.4985	0.5105	0.4985	0.5100	0.4980	0.5110	0.4985	0.5100	0.5106
14	-41.72	0.4985	0.5110	0.4985	0.5110	0.4985	0.5120	0.4990	0.5110	0.4985	0.5110	0.5112
14.5	-42.22	0.4985	0.5105	0.4985	0.5105	0.4985	0.5120	0.4985	0.5110	0.4985	0.5110	0.5112
15	-42.72	0.4985	0.5110	0.4980	0.5110	0.4980	0.5120	0.4985	0.5110	0.4980	0.5110	0.5114
15.5	-43.22	0.4980	0.5115	0.4985	0.5120	0.4985	0.5120	0.4980	0.5110	0.4980	0.5110	0.5118
16	-43.72	0.4980	0.5115	0.4985	0.5120	0.4985	0.5120	0.4985	0.5110	0.4980	0.5110	0.5120
16.5	-44.22	0.4985	0.5120	0.4985	0.5130	0.4985	0.5120	0.4980	0.5110	0.4985	0.5110	0.5122
17	-44.72	0.4985	0.5125	0.5000	0.5125	0.4985	0.5120	0.4980	0.5110	0.4985	0.5110	0.5122
17.5	-45.22	0.5000	0.5130	0.5000	0.5130	0.4980	0.5120	0.4980	0.5120	0.4980	0.5120	0.5126
18	-45.72	0.5000	0.5130	0.5000	0.5130	0.4985	0.5120	0.4980	0.5120	0.4980	0.5120	0.5126
18.5	-46.22	0.5000	0.5130	0.4985	0.5130	0.4985	0.5120	0.5000	0.5120	0.4985	0.5120	0.5127
19	-46.72	0.5000	0.5130	0.4985	0.5130	0.4985	0.5120	0.5000	0.5120	0.4980	0.5120	0.5128
19.5	-47.22	0.5000	0.5130	0.4985	0.5125	0.4985	0.5120	0.5000	0.5130	0.4980	0.5120	0.5128
20	-47.72	0.5000	0.5130	0.4985	0.5120	0.4985	0.5120	0.5000	0.5130	0.4980	0.5120	0.5128
20.5	-48.22	0.5000	0.5130	0.4985	0.5120	0.5000	0.5120	0.5000	0.5130	0.5000	0.5120	0.5127
21	-48.72	0.4985	0.5130	0.4985	0.5120	0.5000	0.5120	0.5000	0.5130	0.5000	0.5120	0.5128
21.5	-49.22	0.4985	0.5128	0.4985	0.5120	0.5000	0.5120	0.5000	0.5130	0.5000	0.5120	0.5128
22	-49.72	0.4985	0.5120	0.5000	0.5120	0.5000	0.5120	0.5000	0.5130	0.4980	0.5120	0.5128

圖 19 砲管各深度膛線尺寸測量數據



圖 20 移動器





圖 21 雷射感測器



圖 22 組裝完成圖



圖 23 將雷射感測器放入砲管



圖 24 連接傳輸線



圖 25 連結電腦



圖 26 完成檢測準備



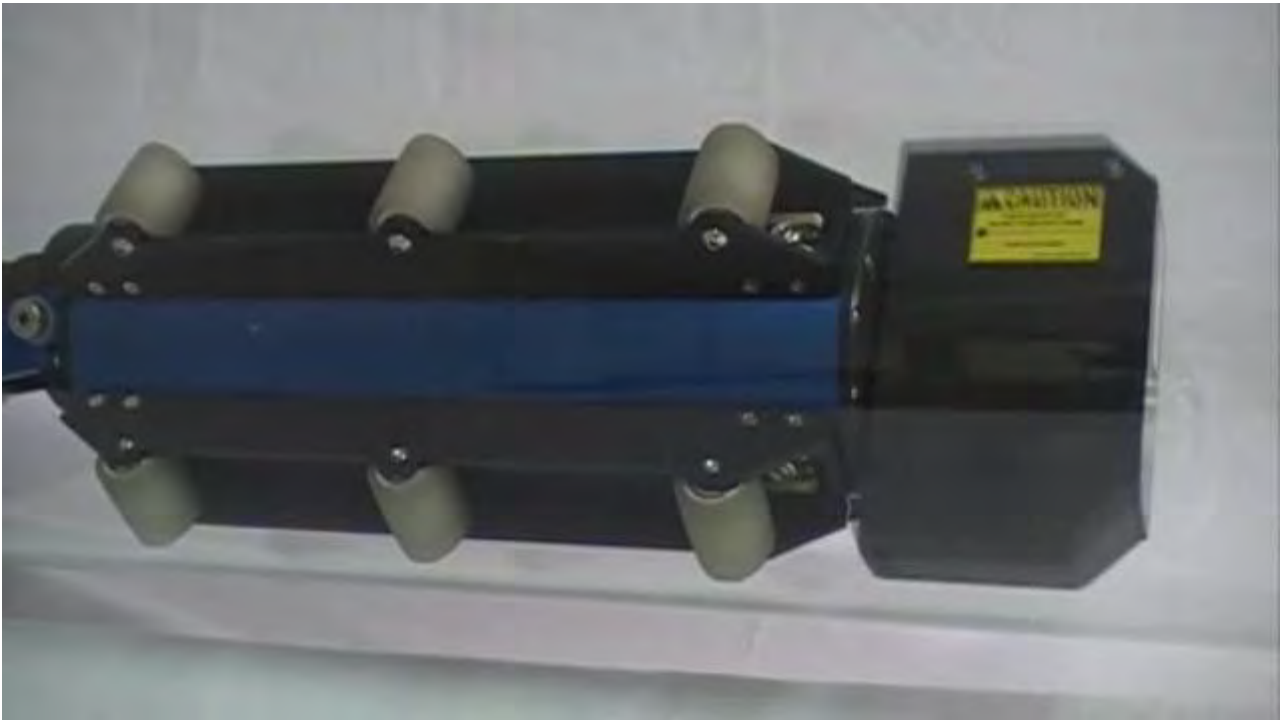


圖 27 感測器模擬作動圖



圖 28 砲口拍攝感測器作動情形



圖 29 砲口拍攝感測器作動情形

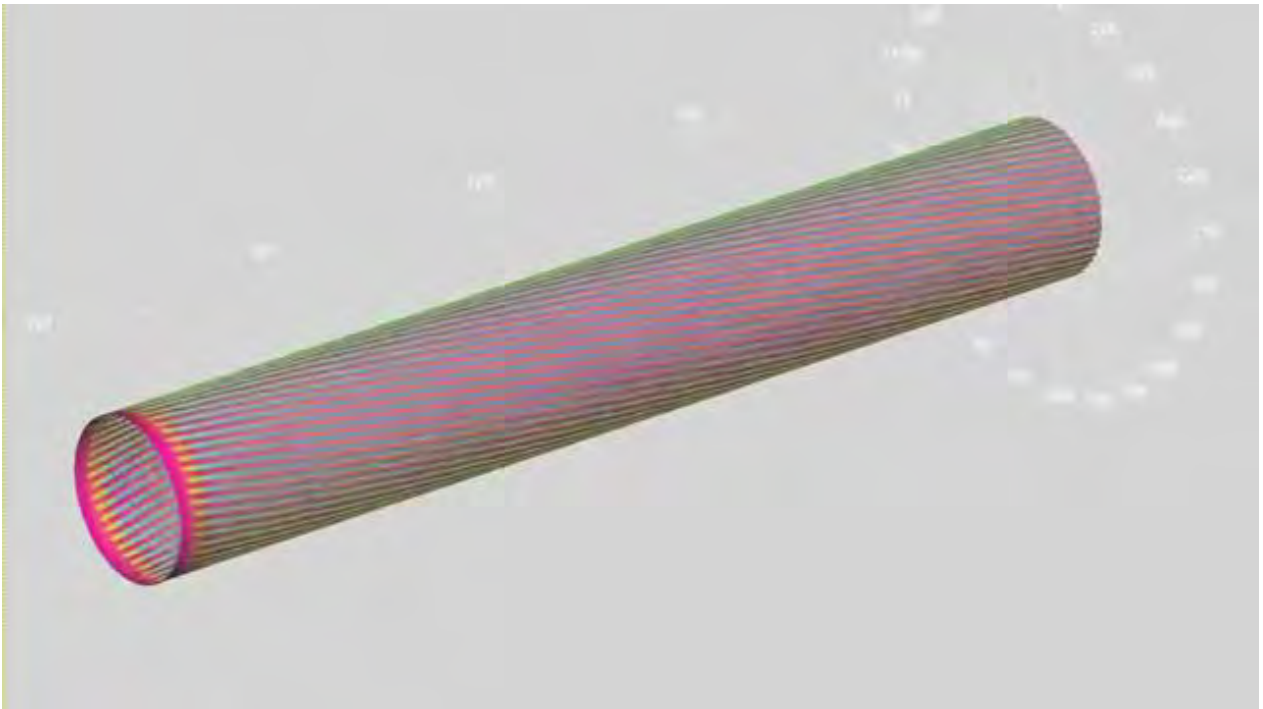


圖 30 砲管三維圖

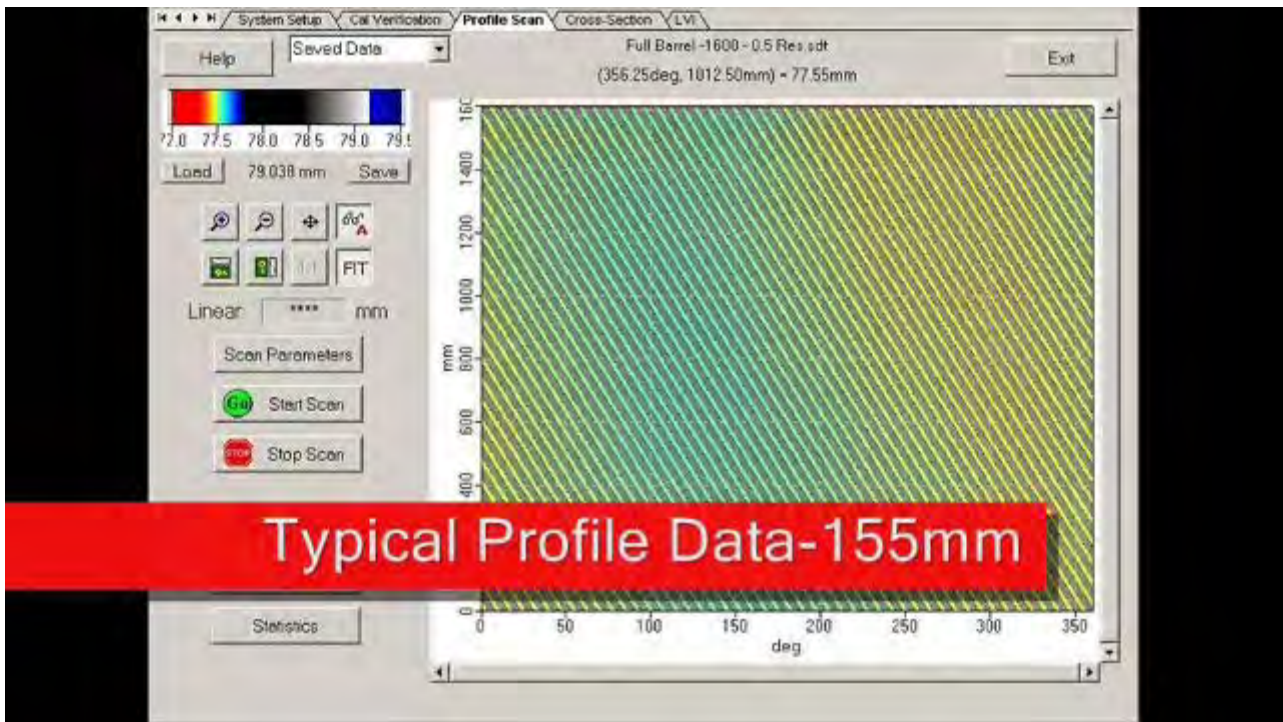


圖 31 膛線加工數據

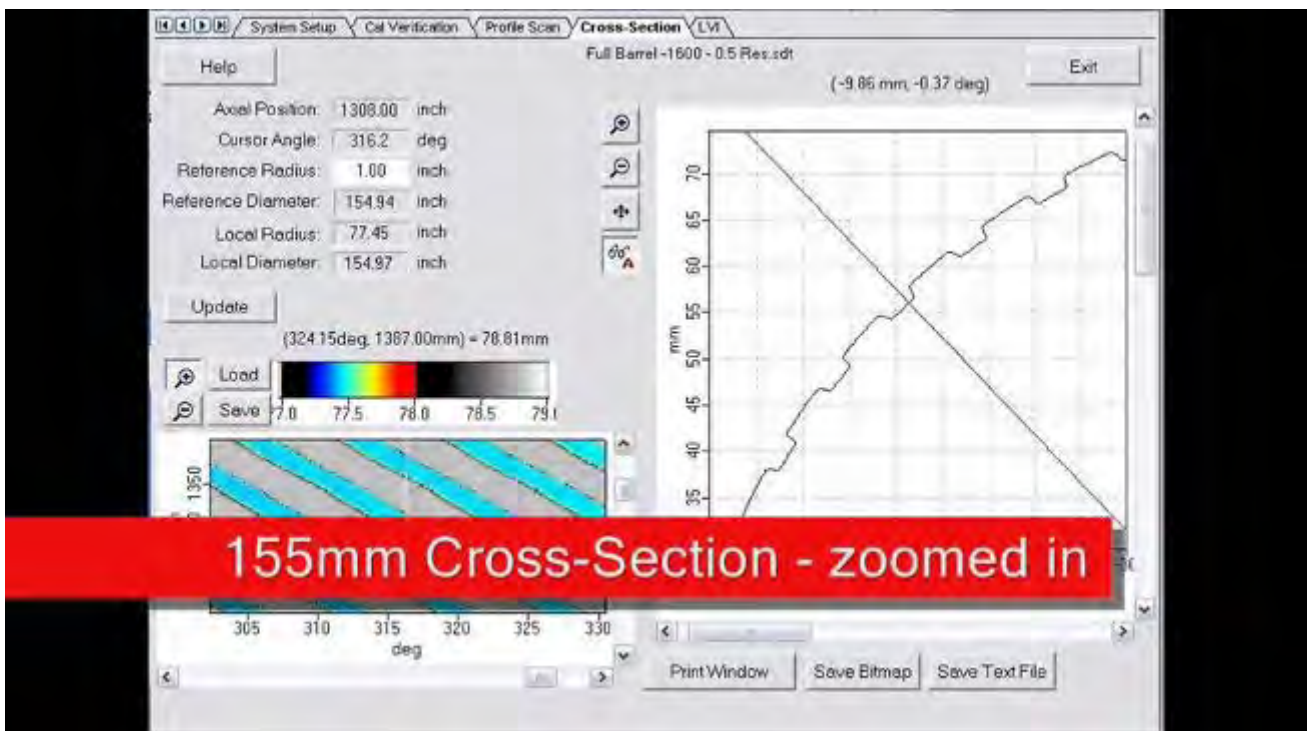


圖 32 膛線加工數據





圖 33 膛線表面圖像



圖 34 發現砲管表面瑕疵



圖 35 將其局部放大



圖 36 檢視加工不良部分及原因分析





圖 37 與 Gulf Coast Filter 公司 Jerry D. Sims 小姐合影



圖 38 過濾裝備



圖 39 濾筒



圖 40 濾心



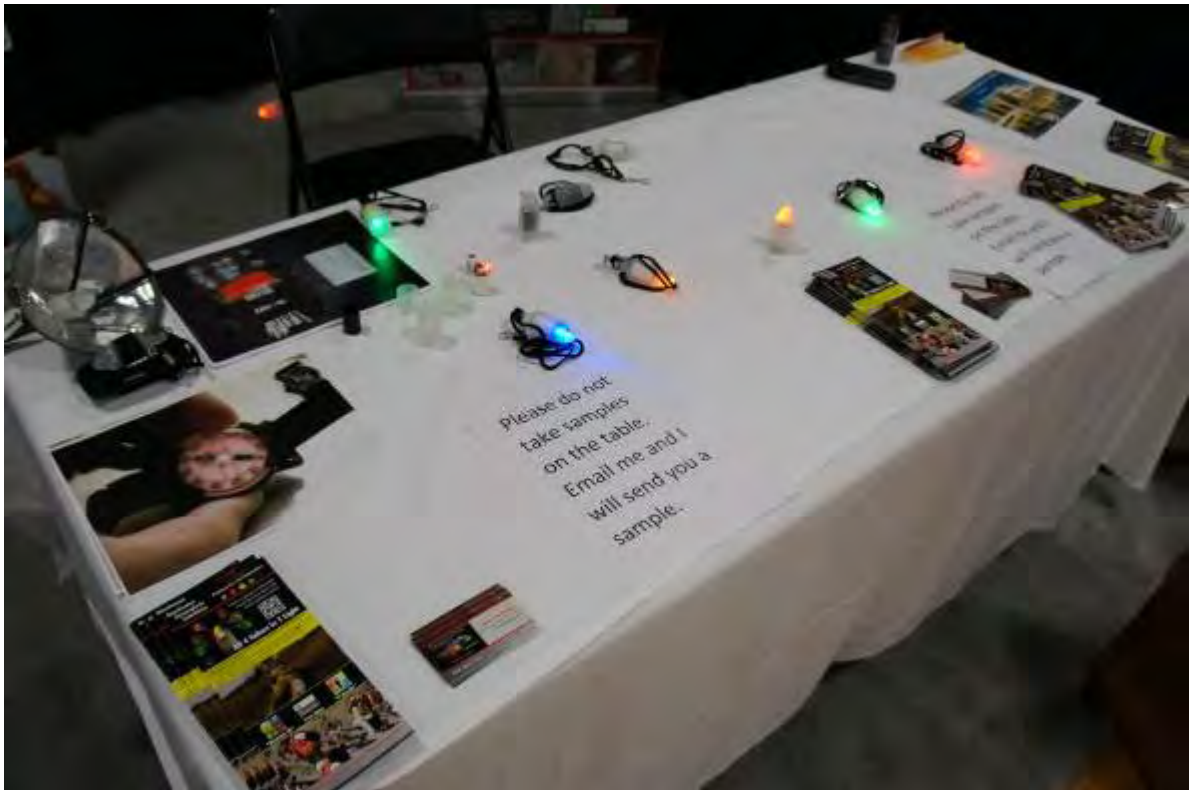


圖 41 緊急分類 LED 燈攤位



圖 42 緊急分類 LED 燈



圖 43 StrikeRazor 越野車



圖 44 StrikeRazor 越野車





圖 45 StrikeRazor 越野車



圖 46 StrikeRazor 越野車



圖 47 越野戰術輪胎



圖 48 Eclipse 公司攤位





圖 49 變速氣動式發射器



圖 50 速度調節桿



圖 51 橡膠彈及漆彈



圖 52 Sprung 公司攤位



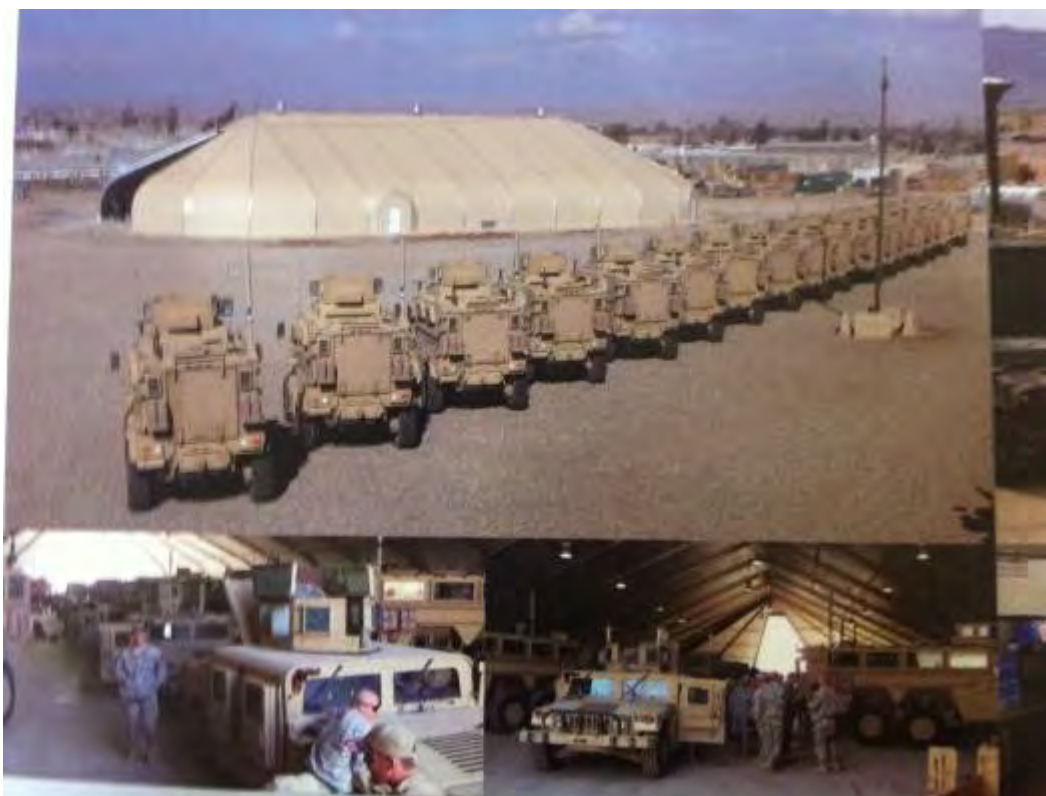


圖 53 Sprung 移動式建築

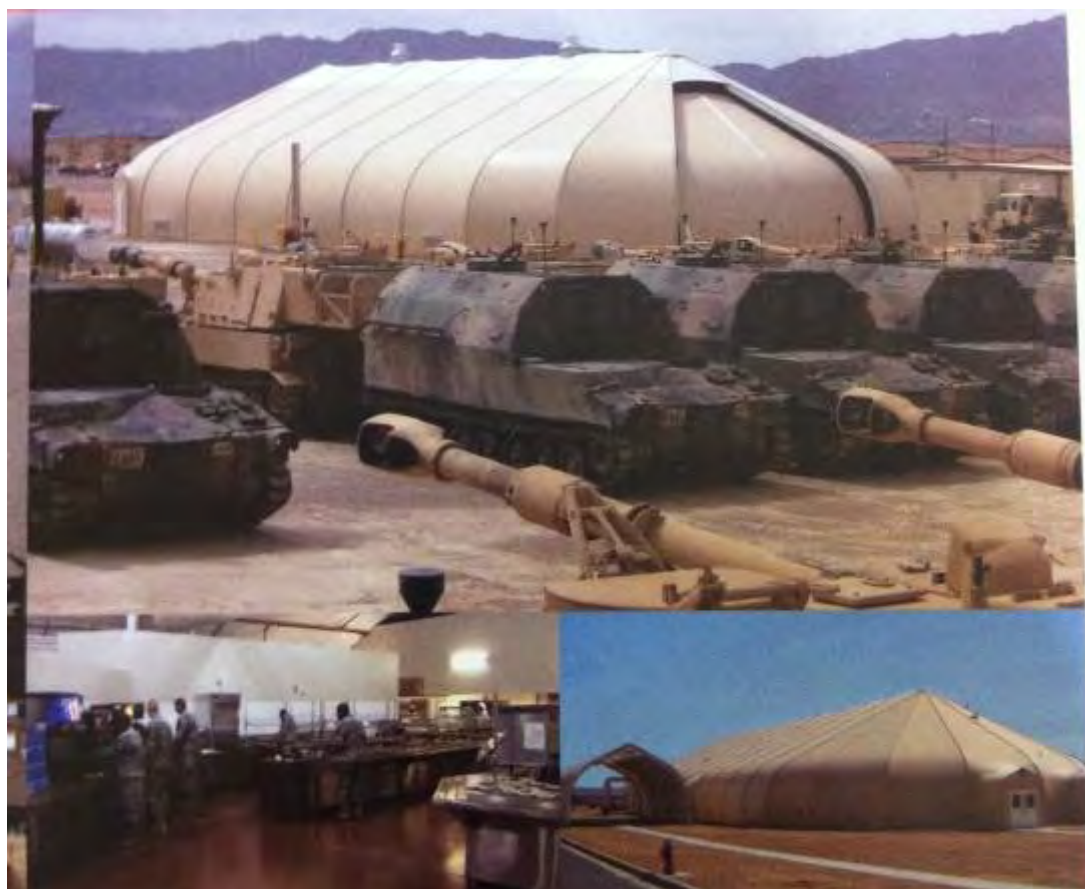


圖 54 Sprung 移動式建築



圖 55 Sprint 公司攤位

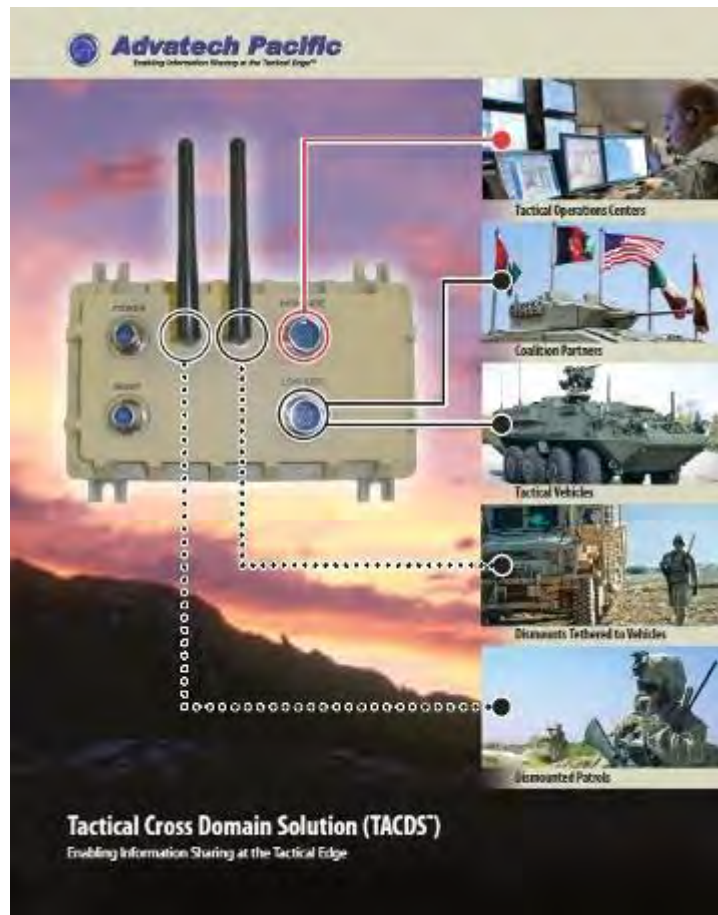


圖 56 TACDS 通訊裝置



圖 57 Advatech Pacific 公司攤位



圖 58 ATEM 裝置





圖 59 ATEM 裝置與武器系統結合畫面



圖 60 戰術防彈背心



圖 61 戰術防彈背心



圖 62 戰術防彈背心



圖 63 戰術防彈背心



圖 64 戰術背帶



圖 65 彈匣帶



圖 66 水平單軸太陽追蹤發電器





圖 67 5V 太陽能電池發電板摺疊圖

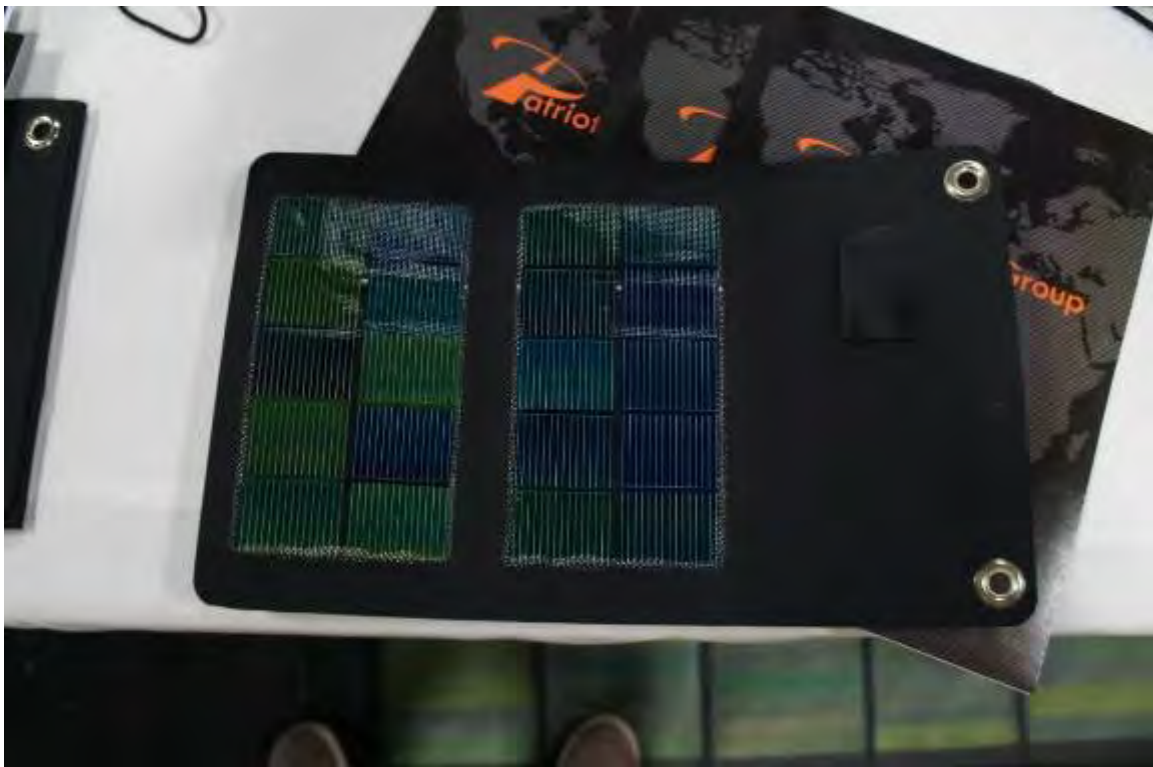


圖 68 5V 太陽能電池發電板展開圖



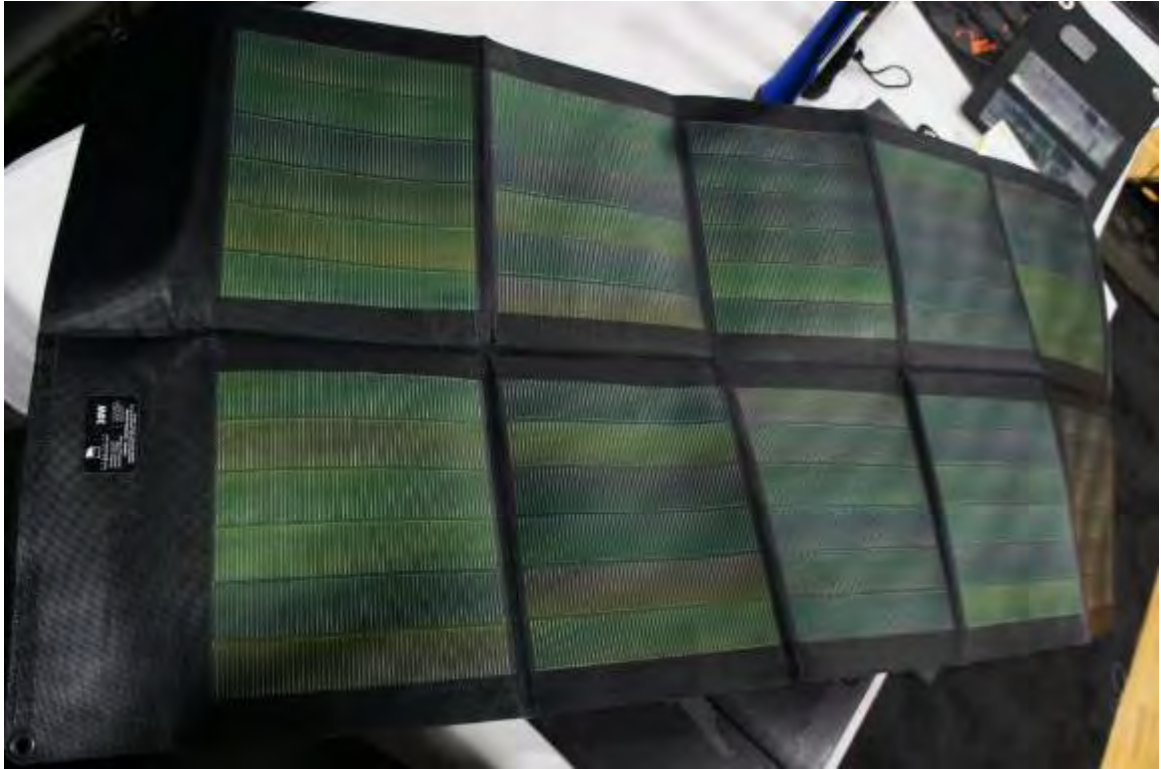


圖 69 30W 太陽能電池發電板展開圖



圖 70 30W 太陽能電池發電板摺疊圖

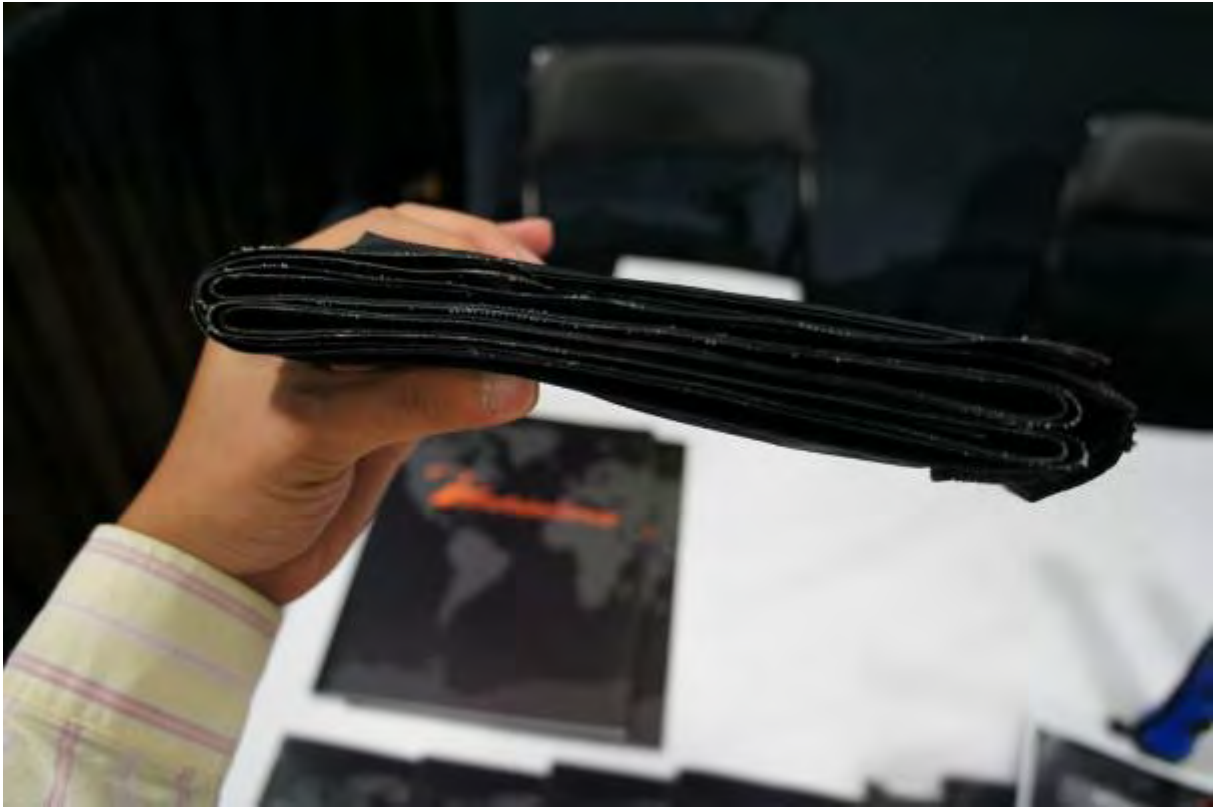


圖 71 30W 太陽能電池發電板摺疊圖



圖 72 噴漆訓練模擬器操作圖



圖 73 HK45 手槍



圖 74 P30 手槍



圖 75 P2000 手槍



圖 76 可調整式握把





圖 77 可調整式握把



圖 78 HK169 榴彈發射器





圖 79 按鈕壓下後即可，槍托即可內折



圖 80 按鈕壓下後，槍托已可折疊



圖 81 摺疊後，槍托嵌進勾型狀設計，即可固定



圖 82 槍托摺疊後示意圖





圖 83 類似插銷的裝置



圖 84 輕拉即可將其鬆開



圖 85 插銷拉到底，與步槍結合後，插銷回復到定位，即完成組裝



圖 86 傳統影像拍攝砲膛檢測圖





**IDGA**  
Institute for Defense and  
Resource Advancement  
**EXHIBITIONS**

Opening & Closing Keynote Presentations  
by Incoming Commander of JBLM

# MILITARY EQUIPMENT & TECHNOLOGY EXPO™

October 1-3, 2012 • Hosted on Joint Base Lewis-McChord, WA

**What people are saying about IDGA  
Military Equipment & Technology Events**

*"The lineup of speakers was nothing less than excellent, and I was pleased to hear fresh and relevant topic coverage... the organization of the agenda and selection of the speakers was top notch. I had considered a competing conference two weeks prior to the IDGA event. We are happy that I chose the IDGA event."*

— Tim Meyerhoff, LG Iris Technology Division

## Exhibitor Prospectus

**Current and Past Military Equipment & Technology Speakers Include:**

**Lieutenant General Bradley Helthold**, Vice Commander, Headquarters U.S. Special Operations Command  
**Dr. James T. Blake, SES**, Program Executive Officer, U.S. Army PEO STRI  
**Lieutenant General John F. Mulholland, Jr.**, Commander, U.S., Army Special Operations Command

[www.militaryequipmentexpo.com](http://www.militaryequipmentexpo.com)



# MILITARY EQUIPMENT & TECHNOLOGY EXPO™

October 1-3, 2012 • Joint Base Lewis-McChord, WA



## Targeted Product Categories Include:

- Ammunition and Fuses
- C4ISR
- Base/Camp Protection & Security
- Body Armor and Apparel
- Communication Systems & Equipment
- Countermeasures, Camouflage & Pyrotechnics
- Electrical Equipment & Soldier Power
- Fire & Explosion Protection
- Military Vehicle Parts & Spares
- Navigation & Satellite Communications
- Noise, Shock & Vibration Control
- Optronics, Surveillance & Sighting Systems
- Personal Protection, Medical & Survival Equipment
- Shelters & Field Hospitals
- Tactical Gear
- Training & Simulation
- Vehicle Ballistic Protection & Personal Protective Gear
- Portable Power
- Solar Power
- Illumination
- Rugged Communication Systems & Equipment
- Machine guns, Small Arms, & Sights

If you supply products and services, or would like to, to those on JBLM, this is the ideal platform for you.

**An expected turn out of 1900 attendees will be there!**  
Maximize your exposure at JBLM Military Equipment & Technology Expo. - Reserve your space Today!



*"Wide variety of quality topics; great discussion on current and future business opportunities."*

- Director, L-3

2 Contact Tom Boccard at [Tom.Boccard@idga.org](mailto:Tom.Boccard@idga.org) or 646-253-5517 • [www.militaryequipmentexpo.com](http://www.militaryequipmentexpo.com)





## JBLM MILITARY EQUIPMENT & TECHNOLOGY EXPO DELIVERS THE AUDIENCE YOU WANT TO SEE!

Offices/Titles that will be in attendance will include:

- Program Managers
- Product/Project Managers
- Acquisition Executives
- Procurement Officers
- Division Commanders
- Project Officers
- Project Engineers
- Directors
- Research & Development
- Research Engineers
- Team Leaders
- CIOs
- Maintenance Commanders
- C-17 Program Directors
- Airlift Capability Managers
- S3 Shops
- S4 Shops
- S6 Shops
- S7 Shops
- I-Corps
- Yakima Training Center
- 62nd Airlift Wing
- Maintenance Groups
- Airlift Squadrons
- Combat Aviation Brigade
- Aviation Regiments
- Operations Support Squadron
- Logistics Readiness Squadron
- Stryker Brigades
- Fires Brigade
- Engineer Brigade
- General Services Administration
- Battlefield Surveillance Brigade
- Sustainment Brigade
- Army Field Support Brigade
- Combat Aviation Brigade
- Operational Test Command
- Air Force Research Lab
- Western Air Defense Sector
- Military Police

*"Very insightful! Good info! Will take information back to integrate the technology into our business ventures."*

- Engineering Manager, BAE Systems Inc., Land & Armaments Group

**Event Features:**

**JBLM Commander  
Opening &  
Closing Keynote  
Presentations**

**VIP Cocktail  
Reception**

**Innovation  
Theater**

**Presentations by  
JBLM Leadership**

**Unprecedented  
Access to 1500 +  
on-base  
personnel**

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# MILITARY EQUIPMENT & TECHNOLOGY EXPO™



October 1-3, 2012 • Joint Base Lewis-McChord, WA

## Investment

### Four Star: Education Package

- Booth Space 10x10
- 20 minute Innovation Theater (highlighted in conference agenda) *ONLY FOUR AVAILABLE!*
- Presentation made available to attendees on post-event website
- Total Value: \$9,000
- **Investment: \$7,000**

**Best Value!**

### Three Star: Product Package

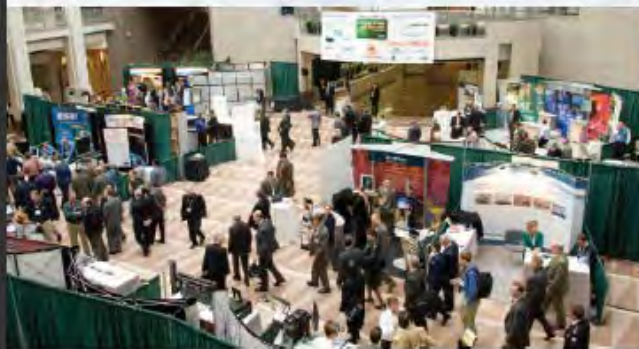
- Booth Space 10x10
- Pre-event Product Email, inclusion in Product Press Release & increased web exposure
- Product placed in Product Showcase onsite
- Post-Event Product Email to attendees with 50 word description and link to website
- Product highlighted in show guide "Product Section"
- Total Value: \$7,250
- **Investment: \$5,600**

### Two Star: Marketing Package

- Booth Space 10x10
- 1/4 Page Ad
- Banner ad on event website
- Partner Marketing
- Total Value: \$6,500
- **Investment: \$5,000**

### A La Carte Pricing

- 20 minute Presentation Theatre (highlighted in conference agenda) <i>ONLY FOUR AVAILABLE!</i> .....	\$4,000
- Product placed in Product Showcase onsite .....	\$1,000
- Banner ad on event website .....	\$1,000
- Pre-event Product Email, inclusion in Product Press Release & increased web exposure .....	\$1,000
- Post-Event Product Email to attendees with 50 word description and link to website.....	\$1,000
- 1/4 Page Ad.....	\$500
- Partner Marketing.....	\$500
- Product highlighted in show guide "Product Section" .....	\$250



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# MILITARY EQUIPMENT & TECHNOLOGY EXPO™



October 1-3, 2012 • Joint Base Lewis-McChord, WA

## Joint Base Lewis-McChord's AFC Arena Floor Plan



### Benefits of Attending:

Invest your time wisely - it's your chance to network with leading equipment and technology professionals and top military experts from the US for FREE!



5 Contact Tom Boccard at [Tom.Boccard@idga.org](mailto:Tom.Boccard@idga.org) or 646-253-5517 • [www.militaryequipmentexpo.com](http://www.militaryequipmentexpo.com)





# TEMPORARY VEHICLE PASS

## LEWIS-MCCHORD, WA



PASS#: 8450317

Pass Issue Date: 10/3/2012 9:46:56

Name: LIU, DA MING

Tag #: AIP6669 W2

Vehicle: 12 TOYOTA CAMRY, GRAY, SEDAN - 4 DOOR

Add. Drivers: INTERNATIONAL DRIVERS LICENSE

**\*ALL VEHICLES ARE SUBJECT TO SEARCH. PERSON(S) REFUSING TO BE SEARCHED WILL BE DENIED ACCESS. NO FIREARMS, WEAPONS, ILLEGAL DRUGS, OR FIREWORKS ARE AUTHORIZED WITHOUT PRIOR \*APPROVAL. VIOLATORS MAY BE PROSECUTED AND BARRED FROM JOINT BASE LEWIS-MCCHORD. PLACE PASS IN WINDSHIELD SO IT IS VISIBLE AT ALL TIMES. VISITORS MUST USE THE FAR RIGHT LANE AT ALL GATES.\***

Dest/Purpose: TRADE SHOW

### VALID THRU: Wednesday, 3 October 2012

AR 190-5 & FL REG 190-5

SIGNATURE: \_\_\_\_\_

DA MING LIU

APPROVED BY: \_\_\_\_\_

KMF 3OCT12 675 0945

### Visitor Badge

LEWIS-MCCHORD, WA



DOB: 1966/07/24  
Race: ASIAN/PAC ISLA  
Ethnicity: UNKNOWN  
Sex: M  
Height:  
Weight: 150  
Eye Color: BROWN  
Hair Color: BLACK

**DA MING  
LIU**

**Expires: 2012/10/03**

Destination: TRADE SHOW

POC: JANET FOSTER

Phone: 360.790.6281

Visitor Type: DOD CIV/MILSP

### Badge # 8450317

# Visitor Badge

LEWIS-MCCHORD, WA



DOB: 1982/12/29  
Race: ASIAN/PAC. ISLA  
Ethnicity: UNKNOWN  
Sex: M  
Height:  
Weight: 140  
Eye Color: BROWN  
Hair Color: BLACK

**YONG  
LU**



**Expires: 2012/10/03**

Destination: TRADE SHOW

POC: JANET FOSTER

Phone: 360.790.6281

Visitor Type: DOD CIV//MILSP

**Badge # 8450309**



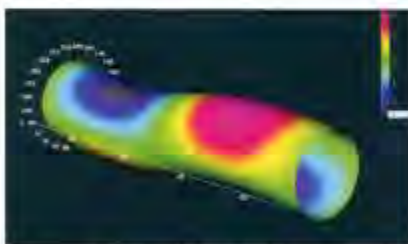
## BEMIS-SC™ Small Caliber (5.56mm – .45 Cal) Bore Erosion Measurement and Inspection System



Designed to Inspect Small Caliber Gun Barrels



7.62mm BEMIS-SC™ Laser Sensor



3D Image of Bore Deflection



3D Image of Gun Barrel Rifling and Erosion

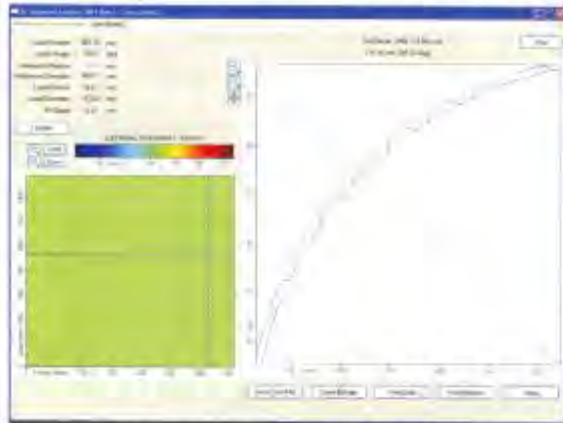
### BEMIS-SC™ Features

- **High Resolution** laser-based inspection system for assessment of gun barrel condition
- **Automated** inspection process removes operator subjectivity
- **3D Precision** bore erosion profiling and laser-based dimensional measurements
- **High Resolution LaserVideo™** provides camera-like image of entire gun tube surface
- **Quantitative data** for unparalleled gun tube surface and erosion analysis
- **Advanced analysis and reporting** software provides data in hard-copy summary or exportable to text file
- **Transportable Inspection Data** can be stored, transmitted and reviewed at remote locations
- **Automatic report generator** software provides tabular summary of test results
- **Operator-Configurable** motion and scan control
- **Quick setup** with automatic calibration routine
- **Sensor modules** easily exchanged
- **Optional Bore Straightness and Deflection Module**
- **On-Site training** available

**LTC...Making Heroes™**

6742 185<sup>th</sup> Ave NE • Suite 300 • Redmond, WA 98052 • Phone (425) 885-0607 • Fax (425) 885-0802 • [www.laser-ndt.com](http://www.laser-ndt.com)





Typical Display allows operators in-depth analysis of test results

**BEMIS-SC™ includes:**

- LP-4210™ Data Acquisition and Control Unit
- LaserViewer™ Software
- External Motor Control unit
- Rigid Sensor Delivery Station
- Laser Sensor Scanning Assembly
- Guide Tube Adapter and Calibration Set
- Hard-sided Shipping Cases
- Instruction Manuals



BEMIS-SC™ Inspection Station

-----

Scan	Angle	Delta	Distance	Layer	Depth	Delta	Distance	Delta	Distance	Distance	Average
11	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
12	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
13	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
14	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
15	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
16	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
17	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
18	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
19	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
20	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
21	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
22	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
23	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
24	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580
25	-15.72	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580	0.4580

Test results can be generated in tabular format

**Basic Specifications:**

**Axial scan resolution:** Up to 0.1 mm (0.004 inch) per increment

**Rotary scan resolution:** Up to 0.1 mm (0.004 inch) per increment

**Sensor resolution:** 5 microns (.00025 inch)

**Sensor Linearity:** 12 microns (.0005 inch)

**Laser Power:** < 4 mW

**Laser Spot Size (max):** 0.05 mm (0.002 inch)

**Laser Power Classification:** Class II

**Power:** 110/240 VAC – 50/60 Hz

**Test Results Displayed:** Contour view and cross sectional

**Surface contour display with 256 color, grey-scale, thermal and solid color options**



**BEMIS-MC™ Medium Caliber (20mm – 76mm)  
Portable Bore Erosion Measurement and Inspection System**



Designed to Inspect Medium Caliber Bores



35mm Portable Sensor Delivery Unit and  
Guide Tube Adapter



LaserVideo™ Image of Gun Bore



LaserViewer™ Analysis and Reporting Software

**BEMIS-MC™ Features**

- **High Resolution** laser-based inspection system for assessment of weapon bore condition
- **Rugged and Portable Design** for use in the field or shop
- **Automated** inspection process removes operator subjectivity
- **3D Precision** bore erosion profiling and laser-based dimensional measurement
- **High Resolution LaserVideo™** provides camera-like image of entire gun tube surface
- **Quantitative data** for unparalleled gun tube surface and erosion analysis
- **Advanced analysis and reporting** software provides data in hard-copy summary or exportable to text file
- **Transportable Inspection Data** can be reviewed stored and reviewed at remote locations
- **Automatic report generator** software provides tabular summary of test results
- **Operator-Configurable** motion and scan control
- **Quick setup** with automatic calibration routine
- **On-Site training** available

**LTC...Making Heroes™**





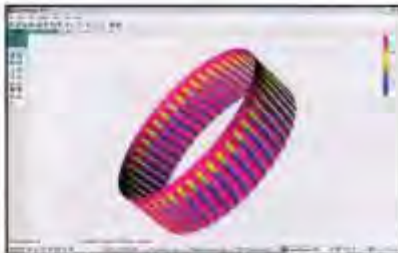
## BEMIS-LC™ Large Caliber (105mm – 155mm) Bore Erosion Measurement and Inspection System



Designed to Inspect Large Caliber  
Weapon Bores



155mm Self-Propelled Scanning Assembly



3D Image Segment of 155mm Gun Bore

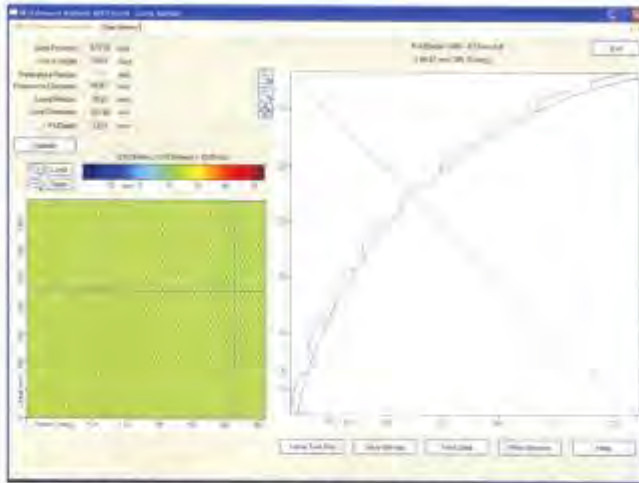


LaserViewer™ Analysis and Reporting  
Software

### BEMIS-LC™ Features

- **High Resolution** laser-based system for assessment of weapon bore condition
- **Rugged and Portable Design** for use in the field or shop
- **Muzzle brake** does not have to be removed during inspection
- **Automated** inspection process removes operator subjectivity
- **3D Precision** bore erosion profiling and laser-based dimensional measurement
- **High Resolution LaserVideo™** provides visual, camera-like image of entire gun tube surface
- **Quantitative data** for unparalleled gun tube surface and erosion analysis
- **Advanced analysis and reporting** software provides data in hard-copy summary or exportable to text file
- **Transportable Inspection Data** can be reviewed stored and reviewed at remote locations
- **Automatic report generator** software provides tabular summary of test results
- **Operator-Configurable** motion and scan control
- **Quick setup** with automatic calibration routine
- **On-Site training** available

**LTC...Making Heroes™**



Typical Display allows operators in-depth analysis of test results.

Test results can be generated in tabular format

**Basic Specifications:**

- Axial scan resolution:** Up to 0.1 mm (0.004 inch) per increment
- Rotary scan resolution:** Up to 0.1 mm (0.004 inch) per increment
- Sensor resolution:** 5 microns (.00025 inch)
- Sensor Linearity:** 12 microns (.0005 inch)
- Laser Power:** < 4 mW
- Laser Spot Size (max):** 0.05 mm (0.002 inch)
- Laser Power Classification:** Class II
- Power:** 110/240 VAC – 50/60 Hz
- Test Results Displayed:** Contour view and cross sectional
- Surface contour display with 256 color, grey-scale, thermal and solid color options**

**BEMIS™ Large Caliber Inspection System includes:**

- LP-4210F™ Field-Grade Data Acquisition and Control Unit Including LaserViewer™ Software
- Self-propelled Crawler Unit
- Laser Sensor Scanning Assembly
- Shielded Sensor Extension Cable
- Integrated Guide Tube Adapter and Calibration Set
- Hard-sided Shipping Cases



**BEMIS™ Scanning 155mm Gun Tube**

**USA**  
Laser Techniques Company, LLC  
[info@laser-ndt.com](mailto:info@laser-ndt.com)

**Japan**  
Kaigai Aviatech  
[uemura@kaigaiaviatech.com](mailto:uemura@kaigaiaviatech.com)

**Korea**  
AirTech Int'l Inc.  
[jay@airtechus.com](mailto:jay@airtechus.com)

**Sweden**  
CLP Systems AB  
[l.lapermam@clp.se](mailto:l.lapermam@clp.se)

**Spain**  
MENPRO  
[antonio.oliva@menpro.es](mailto:antonio.oliva@menpro.es)



## **FUEL CONTAMINATION – SUPPORT EQUIPMENT**



Military Equipment such as this 7-Ton Truck sit idle for long periods of time allowing Algae Growth and sludge to form in the Fuel Tank. This problem will go un-noticed until the crucial time you need to put it in operation, causing the engine to shut down with clogged fuel filters.

### **THE SOLUTION**

To help eliminate fuel contamination issues in the future Gulf Coast Filters has developed a Portable Fuel Polishing System that will clean the fuel and remove moisture and water which helps prevent Algae formation and sludge. This system is currently in use with the U.S. Marine Corps at Blount Island, FL. They simply pull the truck up to the system, place the pick-up and return nozzle into the fuel tank and let the system circulate and polish the fuel for 15 minutes. This system is operating at 24 Gallons a Minute so in 15 minutes the system has circulated the entire volume of fuel in the tank Seven times ensuring that the fuel is clean and dry and ready for use.







## **Gulf Coast Filters Fuel Polishing System**

**GCF FPS 1440 FM**

**PRICE- \$ 44,500.00**

**Price includes delivery to any location in the lower 48 States.**

### **Specifications:**

- 12 GCF Model F-1 Fuel Water Separators (1440 GPH) Capable of removing up to 60 ounces of water each. All 12 Mani-folded for equal flow.
- GCF Model MH-1 Replacement Filters capable of removing particles down to below 1-Micron.
- System includes GCF LPWS- Large Particle/Water Separator- 120 Gallon Capacity for Bulk Water Removal.
- System operates at 24 GPM
- 2 Each Stainless Steel Covered Oberdorfer Bronze Gear Pump, first pump primary, 2<sup>nd</sup> pump will be valved and ready as backup. Pumps are wash down service 110VAC.



- 2 Industrial/ Commercial Automatic Hose Reels- Each Hose Reel Pre-Loaded with 30 Feet 1 1/2" Hose Specified For Fuel Applications.
- 12 Hour Timer for Pump
- Control box to be outfitted with water sensor computer attached to water sensor probe in filter housing.
- Control box to be outfitted with L.E.D. Strobe light for notification of high water level alert.
- System will include Heavy Duty 7000 LB Capacity Trailer with Seal Welded Drip Pan for containment.
- Dimensions- 8 FEET LONG X 5 FEET WIDE X 4 FEET TALL
- WEIGHT INCLUDING TRAILER- 3500 LBS
- SYSTEM WILL INCLUDE 24 REPLACEMENT ELEMENTS FOR THE NEXT 2 SERVICES



**Web** [www.gulfcoastfilters.com](http://www.gulfcoastfilters.com)

**Email** [jerry@gulfcoastfilters.com](mailto:jerry@gulfcoastfilters.com)

**P.O. BOX 2787**

**Gulfport, MS 39505**

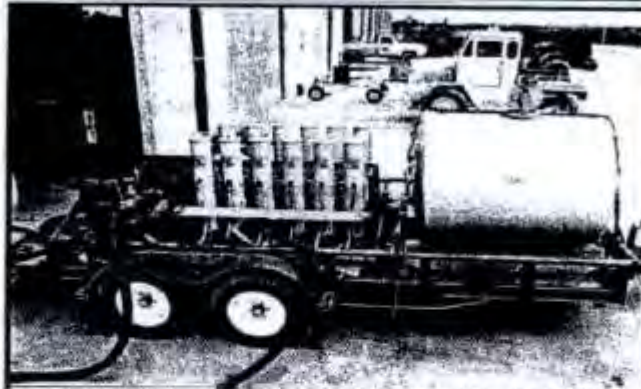
**CELL 228/341-0284**

**TOLL FREE 800/398-8114**

**FAX 601-528-5765**



**TEXAS ARMY NATIONAL GUARD**



**Model Number:** 12XF-2/FM/AP (AL-MS) /HVL/PWR

**Item Purchased:** April 1993, July 1995

**Cost:** \$16,110.66 (1993); \$18,513.96 (1995)

**Placed in Operation:** May 1993 and September 1995

**Manufacturer:** Gulf Coast Filters, P.O. Box 2787, Gulfport, MS 39505.

**Telephone Number:** 228-832-1663.

**Total Cost Avoidance:** Since 1993, 107,601 gallons of diesel have been

Recycled at a savings of \$105,448.98 in cost avoidance for the purchase of new fuel and \$919,988.55 in cost avoidance for waste disposal. Total savings realized from this technology to date is \$1,025,437.50.

Department of Environment and Conservation

***PREVENTIVE MAINTENANCE THROUGH SUPERIOR FILTRATION***



Web [www.gulfcoastfilters.com](http://www.gulfcoastfilters.com)  
Email [jerry@gulfcoastfilters.com](mailto:jerry@gulfcoastfilters.com)  
P.O. BOX 2787  
Gulfport, MS 39505  
CELL 228/341-0284  
TOLL FREE 800/398-8114  
FAX 601-528-5765

## Gulf Coast Filters Fuel Polishing System

### Letter from the Colorado Army National Guard

I am with the MATES 64 at Fort Carson, CO. We have had our filter system for about 15 years and we have saved the State of Colorado about 500,000 Gallons of Fuel for the State. We have spent a minimum amount of funds maintaining this piece of equipment and it was well worth the investment. We would highly recommend this equipment to any business that deals in a high volume of fuel.

Gene Taillacq  
MATES 64  
FT. CARSON, CO 80913

The National Guard also earned a Hammer Award for 1996 from the Vice President to recognize its work to prevent pollution, which not only improved environmental management but also saved the taxpayers money.

The Guard's Pollution Prevention Committee developed innovative programs for recycling diesel fuel, freon, used oil and antifreeze. **Lt. Col. Donald Tryce, the Guard's hazardous waste manager, cited a few examples: filtering diesel fuel,** crushing oil filters to squeeze more of them into recycling barrels, and using "hot parts washers" to clean engine blocks on a system that works like a rotisserie.

**PREVENTIVE MAINTENANCE THROUGH SUPERIOR FILTRATION**

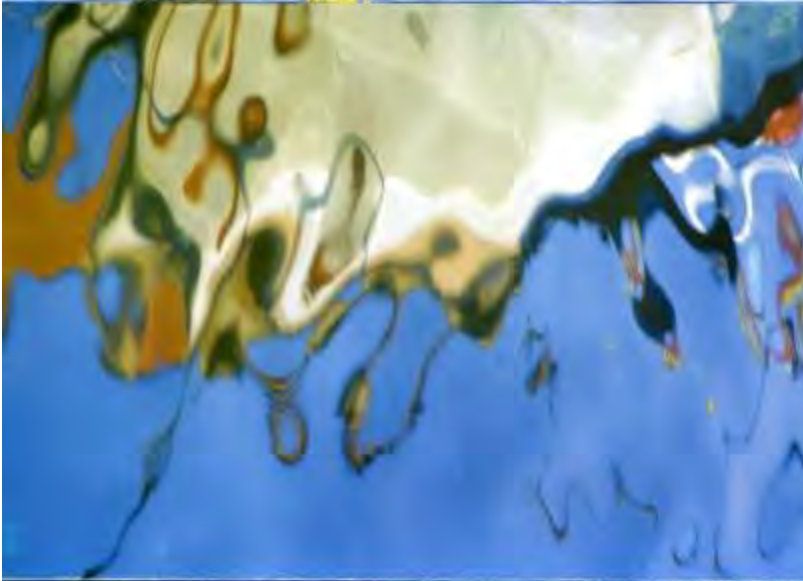
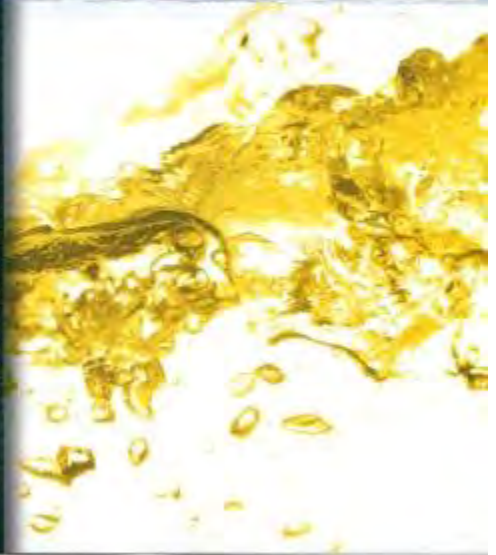


### ***Fuel Polishing Eliminates Fuel Problems***

The most common reason for marine engine failure is fuel contaminated by algae and other microbes. Statistics have shown that the average yacht only operates 250 hours per year and sits idle months at a time. These extended periods of non-use allow ample time for algae and other microbes to grow and adhere to the walls of fuel tanks.

While not a problem when idling at the dock, once underway the contamination breaks away from fuel tank walls and mixes with fuel. Filters become clogged and engines shut down...a potentially dangerous situation in rough seas or miles from land.

***Kills 100% of fuel tank algae  
and other microbial growth***



By eliminating the need for a fuel polishing truck at the dock, you also eliminate dirty hoses scratching your boat deck and running through your cabin down to the engine compartment...the patented Gulf Coast Fuel Polishing System, for additional information contact:

***Gulf Coast Filters***

Steve Barras

337-319-8240

FAX 337-367-7990

[www.gulfcoastfiltersla.com](http://www.gulfcoastfiltersla.com)

***Gulf Coast Filters***

***The Leader in Fuel Polishing***



[www.gulfcoastfiltersla.com](http://www.gulfcoastfiltersla.com) • 337-319-8240



### ***Gulf Coast Filters Has Earned the Respect of Yachting Customers Worldwide***

We've furnished compact fuel polishing units to yachting customers for over 25 years...our products are simple to service, cost effective and built to last the lifetime of your boat.

Our patented fuel polishing systems polish your fuel when your yacht is not in use and while the engine is running. The system uses its own independent fuel

pump that continuously pulls fuel from the tank, through the filter and back to the tank.

The GCF Fuel Filter removes particles as small as 1 Micron and has one of the largest water traps (84oz. capacity) on the market. In addition, the filter removes moisture from your fuel system to assure water free, clean, analytically dry fuel.



### ***On Board Fuel Maintenance for Safety and Peace of Mind***

Gulf Coast Fuel Polishing Systems are the perfect maintenance alternative to using a fuel polishing truck when in port (unavailable when you are away from the dock) because Gulf Coast Filters operate 7 days a week, 24 hours a day...killing 100% of fuel tank algae and other microbial growth! We also offer professional, experience based (40 years in the marine industry) consulting and custom design systems to meet your needs.

### ***Compare the advantages:***

- Patented Gulf Coast Filters Technology
- ISO tested below 1 Micron Filtration
- Water Free, Moisture Free, Analytically Dry Fuel
- Computerized Electronic Water Sensor
- Bronze Oberdorfer Gear Pump
- 12 Hour Timer
- Heavy Duty 3/4" Starboard
- Stainless Steel Electrical Box
- Stainless Steel, Liquid Filled Vacuum Gauge
- Extra Large Contaminate Removal Capacity
- Simple to Install - Simple to Service
- Rugged & Dependable for Lifetime Reliability
- Unparalleled Hands-On Experience
- No Chemicals, No Magnets, No Trucks

***The Daily Mounted FPS 360D Fuel Polishing System is available for portable applications.***





## Solutions For First Responders

**E/T Light®**  
 • Red  
 • Amber  
 • Green  
 • Blue  
 • IR

**Attached Locations (Legal)**

- Mounted Top**  
Designed to be used with the user's existing fire switch even under dual control mode.
- Recessed Switch**  
This switch is located inside the body of the E/T Light®. This helps reduce the electrical load on the fire switch throughout the incident. This can help to reduce the fire switch's heat and prevent fire.
- Silicon Housing**  
The E/T Light® is made from a high quality, durable, fire resistant material. The light has been tested to meet or exceed all fire codes and standards.
- Interference Fit Seal**  
When necessary, pressure is added to the E/T Light®.
- End cap Options**  
Choose from the cross-hatched magnetic end cap, loop-in cap or custom end cap for vehicles.
- Lithium Battery**  
Specially designed for fire use. Our lights show that the red LED will illuminate for a minimum of 22 hrs. The blue LED will illuminate for a minimum of 144 hrs. The green LED will illuminate for a minimum of 132 hrs. (from 100% full) up to 240 hours when used in flashing mode. (from 100% full) up to 144 hrs.
- Easy Battery Removal**  
Designed to be removed in seconds. No tools required.
- Software Features/Board Features**  
The E/T Light® has a built-in software system that allows the user to customize the light's color, flash rate, and sound. The user can also program the light to flash in a specific pattern. The user can also program the light to flash in a specific pattern. The user can also program the light to flash in a specific pattern.
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- Look Features**  
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- LED's**  
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The E/T Light® may be equipped with the optional LED's.  
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## Solutions For First Responders

Synergistic Solutions

IR ● ● ● ● ●

Reduce patient collection times by over 30% with fewer patient errors.

### All 4 Colors in 1 Light

MSN's recently issued for newest versions 6.8A (6230-01-405-9650) and 6.8IR (6230-01-405-9635).

E/T Light now associated with the Standardized Equipment List (SEL) Numbers (030E-03-GULB) System, Marking, Green Line/Red Line/And (03MS-01-TTAG) Tags and Supplies, Triage.

"By failing to prepare you are preparing to fail"  
-Ben Franklin

The vast majority of the comments were very positive regarding the exercise where you incorporated several technological innovations, including the triage lights. "We appreciate the efforts of your company to make a user friendly, waterproof, and robust product to aid first responders in mass casualty incidents."

Jackson-Madison County Regional Health Department Emergency Response

"After receiving the lights, numerous other uses for the lights have been identified. Not only can they be used to identify patients in the field, but they also can be used in the treatment/transport area by EMS and Nursing staff to quickly identify which patients need to go first. Or, in the event a patient's status changes, the light can be changed quickly. The lights can also be used during recovery operations to identify where rescuers are located." "The lights received great reviews. We are proud to add Triage Lights to our response as sets for future missions."

SFPA

"We had the opportunity to use the lights during a recent Casualty Care Course and they performed flawlessly." "There are a variety of applications for this lighting system in our industry, and we are pleased to spread the word about these new devices."

**SSI SECURITY SOLUTIONS INTERNATIONAL**

"I wanted to take this opportunity to let you know we have incorporated your triage lights into our training programs. Since we were made aware of the lights we have been using them in scenarios as it relates to Special Operations, SWAT, EOD, CBRNE, EMT, Tactical Medicine and mass casualty incidents. We have used them to illuminate IEDs, hazardous chemicals such as Anthrax. We also use them to mark egress rooms and rooms that are a no go. Of course we use them for triaging victims in mass casualty incidents. We recommend the lights highly and truly believe they are an important tool to achieve the two most important things, succeed in the mission while returning home safely. As a company that has provided training to over 1000 agencies in the USA we know the importance of quality products that are rugged enough yet cost effective and easy to use. Your triage lights should be part of all first responders kits when deployed to the field."

**Juan Cienfuegos**  
Inventor/Managing Member  
[www.TriageLights.com](http://www.TriageLights.com)

Triage Light App

**99¢**  
Primitives go to charity

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Solutions For First Responders

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Triage Light App

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## Solutions For First Responders

The **Emergency/Triage Light** is a newly patented method and device that addresses the need for an effective night time/adverse condition triage system, be 24/7 prepared. Developed in conjunction with United States Special Operating Forces, the **E/T Light®** is combat proven and offers a faster, easier, and more effective way of initially marking and prioritizing individuals for medical care at the scene of various emergency situations. **E/T Lights** are easy to place and provide accurate information relating to a victim's degree of injury especially at night or during adverse conditions.

In fact, a study shows that by using lights in triage you reduce patient collection times by over 30% and reduce patient collection errors from 4 errors down to 1 error.



Further, since triage tagging is often performed under the most harried of conditions and confusion is increased when smoke, dust and poor weather conditions obscure the ability to determine the triage status and to fill out a comment card in relation too. The **E/T lights** provide illuminated signals that visually provide the triage status of an injured person/animal at a distance and in low visibility settings such as in the rain, fog, snow, in areas of dense undergrowth and multiple other scenarios. Because of this they are more easily seen at a distance by newly arriving support personnel.

First responders can also use the **E/T lights** for

distinguishing between contaminated patients (**Blinking color**) and non-contaminated patients (**Solid color**), route marking, traffic control, perimeter marking, low light illumination and more.

In addition to being used as triage tags, **Emergency/Triage Lights** can take the place of traditional emergency light sources such as chemical light sticks while offering numerous benefits over and above what the chemical light sticks offer.



	E/T Light Life	Chemical Light (CL) Stick Life	Dry utilized
Red	22+ Hours	2 Hours**	36 CLs to 1 E/T Light
Green	192+ Hours	5 Hours**	38 CLs to 1 E/T Light
Blue	144+ Hours	2 Hours**	72 CLs to 1 E/T Light
Blinking Red	180+ Hours	Not Available	N/A
Blinking Green	216+ Hours	Not Available	N/A
Blinking Blue	240+ Hours	Not Available	N/A

\*\* Note: Packaging of the chemical light sticks stated that the products had up to 60 hours of use. My personal test results were that the red and blue chemical light sticks were usable for up to 2 hours. The green chemical light sticks were usable for 5 hours.

- Potential cost savings of over 50%.
- Reduction in storage space.
- Reduction in logistic and storage costs.
- Reduction in weight and volume carried by First Responders.
- Reduction in energy and volume usage.
- E/T Lights are reusable and have replaceable silicon resin lenses and caps.
- Improved response times of support personnel.

In a novel use of this technology we are proposing that our First Responder agencies recognize a simple method for identifying survivors and non survivors in the aftermath of a disaster. This would empower citizens to help first

Patents & Patents Pending  
7326179, D576323, 7510527, 7674227

(956) 645-5265



responders help them. Today citizens must get on roofs during the DAY and wave to let rescuers know they are there. We are proposing that when a disaster alert is issued people who have not evacuated the affected area should tag children with solid red lights, women are tagged solid green, men are tagged solid blue and pets are solid yellow. Once the disaster passes the survivors click the **E/T Light®** to change from a solid selection to a flashing selection. First responders now turn the night into a friend and do flyovers to gather intelligence in order to pre-plan first light-rescue operations. First responders now know the locations of survivors (flashing) and non-survivors (solid). They know the makeup of each group (children, women, men) and they know the condition of the group (how many alive/dead). Specific programming could be set which would let the rescuers know if the victim is alive, injured, etc... In addition, disaster survivors could use the **E/T Light®** for night illumination, general safety and survival for up to almost two weeks after the initial activation!



The method, design and devices themselves are patent protected. For date patents 7326179, D576323, 7510527 & 7674227 have been issued. Several additional patents are still pending.

**Southwest Synergistic Solutions** is a minority owned small business and is proud of serving our military and first responder community.

www.TriageLights.com



# StrikeRazor™ Kits

patented

**ADVANCED MOBILE SYSTEMS  
FOR RAPID RESPONSE**



**RP ADVANCED  
MOBILE SYSTEMS**  
Tactical Vehicle Equipment &  
Weapons Integration Solutions

**RPADVANCEDMOBILESYSTEMS.COM**

**503-434-9446**



# StrikeRazor™ Kits SPECS

www.RPAMS.com



## RP RZR XP-4 StrikeRazor™

ENGINE	ENGINE TYPE	4-Stroke DOHC Twin Cylinder
	DISPLACEMENT	875cc
	FUEL SYSTEM	Electronic Fuel Injection
	COOLING	Liquid
DRIVE TRAIN	TRANSMISSION/FINAL DRIVE	Automatic PVT P/R/N/L/H; Shaft
	DRIVE SYSTEM	On-Demand True AWD/ZWD
SUSPENSION/ CLEARANCE	FRONT SUSPENSION	3200-0076 RP Black Series Performance Shocks with Piggyback (fully adjustable) Reservoir
	REAR SUSPENSION	3200-0077 High Rise Link Kit, AFT (will increase ground clearance 4" without effecting overall height)
	CLEARANCE	2504-0670 RP Single Side Diablo Beadlock Wheel
TIRES & WHEELS	FRONT/REAR TIRES	3200-0014 RP SOF Series 12-ply Run-Flat Tire Desert Tan, 26x9x12
	WHEELS	3200-0000 RP Single Side Diablo Beadlock Wheel
FEATURES	FRONT BUMPER/CARGO	2501-5000 RP Front Bumper/Cargo Assembly
	REAR FLATBED/CARGO	2502-5010 RP Tactical Flatbed Assembly
	TAILGATE	6400-5025 RP Litter Tailgate Assembly
	STORAGE	2504-5180 RP Multi-Purpose Ammo/Fuel Can Holder
	FRONT HITCH RECIEVER	3201-5005 RP 2" Front Receiver Hitch
	REAR HITCH RECIEVER	3201-5000 RP Differential Cover with Tie Down Points/2" Receiver
	WINCH	2504-5170 RP Transferable Winch Basket (shown with Warn 4,000lb winch)
	STANDOFF NERFS	5700-5020 RP Tactical Standoff Nerf Assembly
	BATTERY/POWER	2400-5010 RP Gel Cell (PC680) Quad Battery Assembly with 2-Bank Charger/Isolator
	FRONT SEATING	2504-0630 RP Endurance Seat with MOLLE Webbing
	FRONT RESTRAINTS	2504-5160 RP 4-Point Shoulder Harness Kit (severe-duty, quick release/rotary buckle)
	REAR SEATING	2505-5020 RP Articulating B-Row Seat Assembly
	UNDERBODY PROTECTION	2504-0621 RP UHMW Skid Plate, 1 Piece
	UNDERBODY PROTECTION	5500-0050 RP UHMW Front A-Arm Guards
	OIL RESERVOIR	2504-5150 RP Low Profile Oil Reservoir
	LITTER KIT	2504-5011 RP Multi-Position Litter Rail Kit
	WEAPON SYSTEMS	2504-5081 Platt Swingmount/Adapter

For more information & dealer inquires, please contact:

**Terry Wilmeth,**  
Chief Technical Officer  
**971-237-3217** or  
**Nick Mooers,**  
Project Manager  
**503-434-9446**



## RP ADVANCED MOBILE SYSTEMS

**RP Advanced Mobile Systems, LLC.**  
**Veteran and Minority Owned Business**

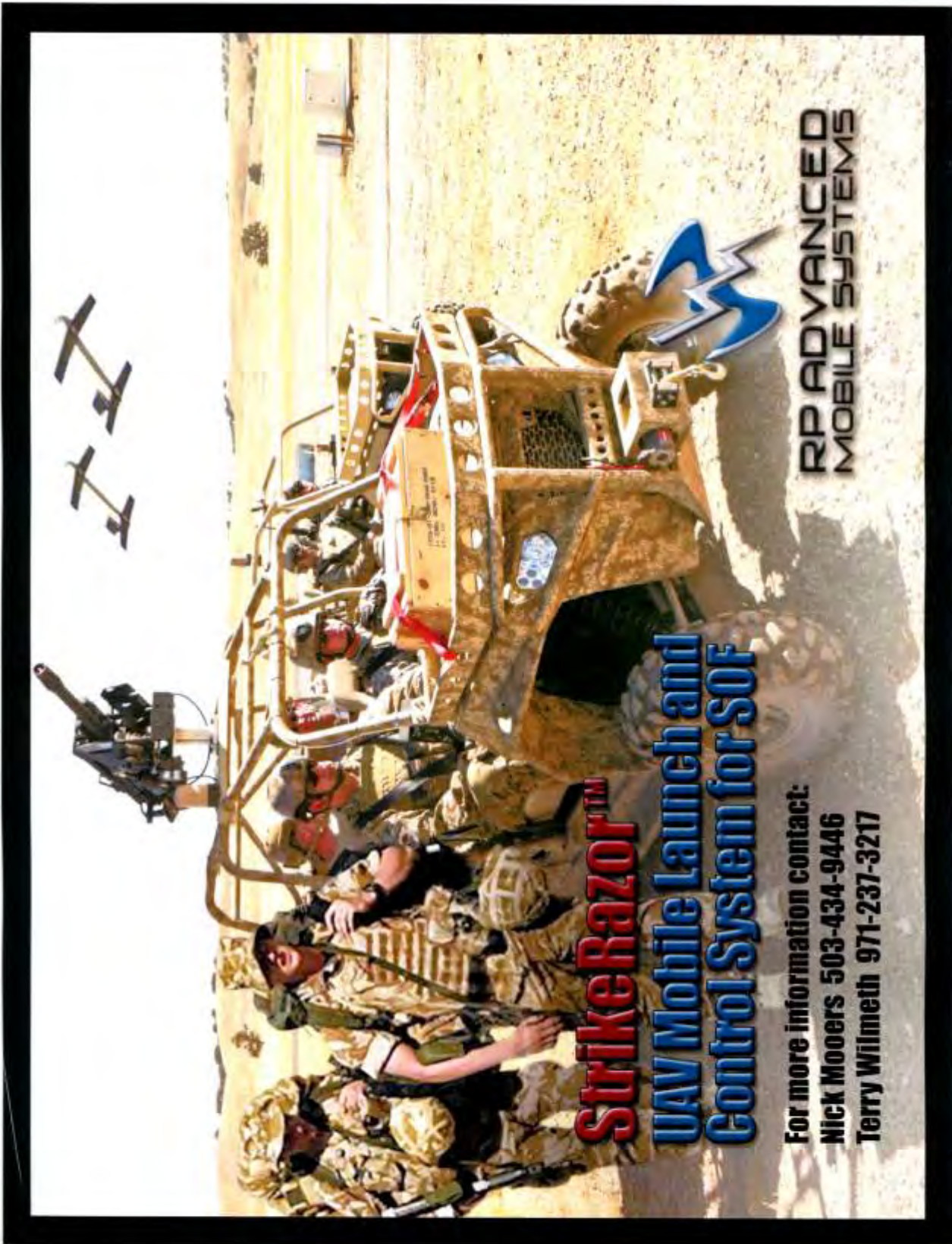
11160 SW Durham Lane, Suite 3  
McMinnville, Oregon 97128  
ph: 503-434-9446 | e-fx: 503-217-6080

DUNS: 829928139 | TIN: 26-4447775  
CAGE code: 5D2V2

The RP SOF tan tire may experience discoloration of the side wall under high temperatures. This discoloration does not compromise the quality of the tire.

All pricing, specifications, claims and information contained in this brochure are based on information available at the time of publication. RP Advanced Mobile Systems, LLC assumes no responsibility for any inaccuracies, opinion, or omissions in those publications. All pricing, specifications, and descriptions are subject to change without notice, and RP Advanced Mobile Systems, LLC assumes no responsibility for changes in pricing or specifications.





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**StrikeRazor™**  
**UAV Mobile Launch and**  
**Control System for SOF**

**For more information contact:**  
**Nick Mooers 503-434-9446**  
**Terry Wilmeth 971-237-3217**

**RP ADVANCED**  
**MOBILE SYSTEMS**





# DON'T BE LEFT STRANDED, RELY ON THE TIRE TRUSTED BY THE MILITARY



**RP ADVANCED  
MOBILE SYSTEMS**

## **RP SOF Series High Load 8/12-PLY Rated Off-Road Tire**

The extreme terrain conditions experienced by U.S. military forces demanded the highest level of tire payload capability and survivability for critical mission success. After extensive designing, engineering, and testing; the **RP SOF (Special Operations Forces) Series Tactical Tire** was developed for SXS/ATV/UTV class vehicles.

- 1000+ pound load rating
- Run-Flat (mil perf std) capability increases operational survivability
- Rated for 30 miles at 35mph devoid of air at an impressive 650lb load
- 26x9x12 & 26x9x14 Universal Sizes



### **UTV RUN-FLAT TIRES**

#### **8-PLY - 26X9X12**

**BLACK** PN: 3200-0012

#### **8-PLY - 26X9X14**

**BLACK** PN: 3200-0017

#### **12-PLY - 26X9X12**

**BLACK** PN: 3200-0013

**TAN** PN: 3200-0014

#### **12-PLY - 26X9X14**

**BLACK** PN: 3200-0016

**TAN** PN: 3200-0015



## RP SOF (Special Operations Forces) Series High Load 8/12-PLY Rated Off-Road Tire

- Its aggressive tread and top notch construction make it incredibly versatile in austere conditions.
- A wide contact patch gives it the right amount of traction while reducing driver feedback.
- The reinforced sidewall design provides full protection with its unique wrapped tread design.
- With its 1000+ pound load rating, the tire is no longer the weakest link.
- The Run-Flat (mil perf std) capability increases operational survivability. Rated for 30 miles at 35mph devoid of air at an impressive 650lb load. (Tested with single 7.62x54 round sidewall penetration.)
- Its lightweight 8- and 12-ply rating improves acceleration without sacrificing engine output.
- The specially engineered casing gives a stable ride and increased resistance to external penetration.
- 26x9x12 and 26x9x14 universal sizes and aggressive multi-direction tread pattern makes the **RP SOF Tactical Tire** unique in comparison to the competitors' limited capabilities and reduces the need for mixed vehicle front/rear tire sizes and mixed spares.
- Uniquely suited for operations in areas comprised of ironwood, shale and other harsh obstacles.



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## COMMERCIAL VEHICLE

We can supply base vehicles for Specialized mission up-fit. No matter which platform you choose, we have the ability to provide the vehicle along with the sustainment package.

## SUSTAINMENT

As the largest OEM Parts dealer in America; we can support your vehicles with follow up delivery of maintenance or repair parts; as well as specialized accessories to ensure mission success.



## TRAINING

Certified technicians offer mechanical training; while some of the best off-road drivers in the world conduct driver's training. On-Site or Off-Site, CONUS or OCONUS training available.

## SPECIALIZED VEHICLES

Our relationships with specialized builders allow us to up-fit the vehicle for your specific need. From Border Security to Direct Action in high altitude operations. We can build what you want.



## ACCESSORIES

Commercial or custom build. We can get you whatever you need for the mission.

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[www.MilitaryAtvParts.com](http://www.MilitaryAtvParts.com) [mikej@gsaparts.com](mailto:mikej@gsaparts.com) 213-935-0840

# ECLIPSE

Eclipse 40mm

Variable Velocity Pneumatic launcher

Tactical Pneumatics  
info@eclipselauncher.com  
206-422-8830  
September 2012



#### Specifications:

6 round cylinder with break forward breech  
Variable velocity with four power settings  
Non-Pyrotechnic / No muzzle flash / Low acoustic signature  
Semi automatic action / No winding necessary / Gas piston operation  
120 Rounds per minute cycle rate  
Operating pressure 150-1200 psi  
Polycarbonate bore sight  
Interchangeable ported barrels 37-40mm / Rifled or smooth bore  
Quick connect / release for secondary air supply

#### Ordnance:

40mm CS and OC timed aerosol canisters, 40mm finned blunt impact, OC paintball shot, Finned OC impact activated blunt impact and water activated aerosol canisters. All ammunition is case-less.

The launcher and ammunition have been designed to be an efficient and safe alternative to pyrotechnic launchers and ammunition currently fielded. Standard rounds which are propelled with a pyrotechnic charge are intended for use at 100 feet from the target and do not allow for the velocity of the projectile to be adjusted.

By use of a small adjustment lever, the operator can control the amount of air reaching the ammunition to modify the speed of the projectile. This is useful in close combat situations when a high velocity shot is not desirable or when more power is needed to increase the effective range. **The low power setting allows for an operating distance of under 1 meter from target.**

This feature will reduce the number of blunt impact trauma injuries at close range and allow our forces to deploy Non-Lethal force in a wider variety of scenarios.

Further development will incorporate a laser range finder to automatically adjust the velocity for the operator which will simplify the process and reduce work load

#### Cost and Schedule:

\$1,500,000.00 For 500 units at \$3000.00 per unit.  
Deliverable in 6 months from initial order date.  
Production can be ramped up to >300 units per month within 12 months.

#### Deliverables:

Launchers will ship configured with a 3000 psi, 13 cubic inch air tank integrated into the adjustable stock, SCUBA fill station, operators manual, 6" Picatinny 1913 rail and fore grip.

#### Options:

Carbon fiber 40 cubic inch, 4500 psi air tank  
Steel 33 Cubic inch, 3000 psi air tank  
Aluminum 10 cubic inch, 3000 psi quick release air tank  
Carrying handle  
Additional barrels

#### Corporate Information:

Rory M. Berger, President, Tactical Pneumatics, WA 206-422-8830



### All 40mm pneumatic launchers in development

#### Specifications:

Variable velocity 100-600fps  
Non-Pyrotechnic  
No muzzle flash  
Low acoustic signature  
Semiautomatic action  
120 Rounds per minute cycle rate  
Operating pressure 150-1200psi  
Interchangeable Barrels  
400 meter Range / 20 foot radius  
40 meter Range / 1 foot radius  
Low power setting allows for operating distance of under 1 meter  
Source of air can be SCUBA or Paintball type tanks of 3000 to 4500psi,  
Approx. 1 shot per cubic inch from 3000psi source tank at 200psi operating pressure  
Stationary or portable/mobile compressors with reservoirs may also be used.

#### Magazine Fed Features:

Detachable 40mm magazine well  
Blow forward bolt  
Quick release air supply  
Unified air option for magazine  
Narrow profile 2.25"



**Belt Fed Features:**

- 30 round ammunition box
- 40mm Linked shell carrier belt
- Interchangeable ballast chambers
- Polycarbonate bore sight
- Remote electronic operation option



**Ordnance**

Available ammunition includes timed and water activated aerosol canisters to deliver OC, CS or other liquid payloads, less-lethal fin-stabilized projectiles, 40mm rubber bullets and paintball shot. Due to the pneumatic nature of the launchers, all ammunition is case-less which allows for larger payloads and decreased acquisition costs. Standard issue rounds such as illumination and high explosive ordnance will be adopted for use in the launchers





### Competitive Advantages

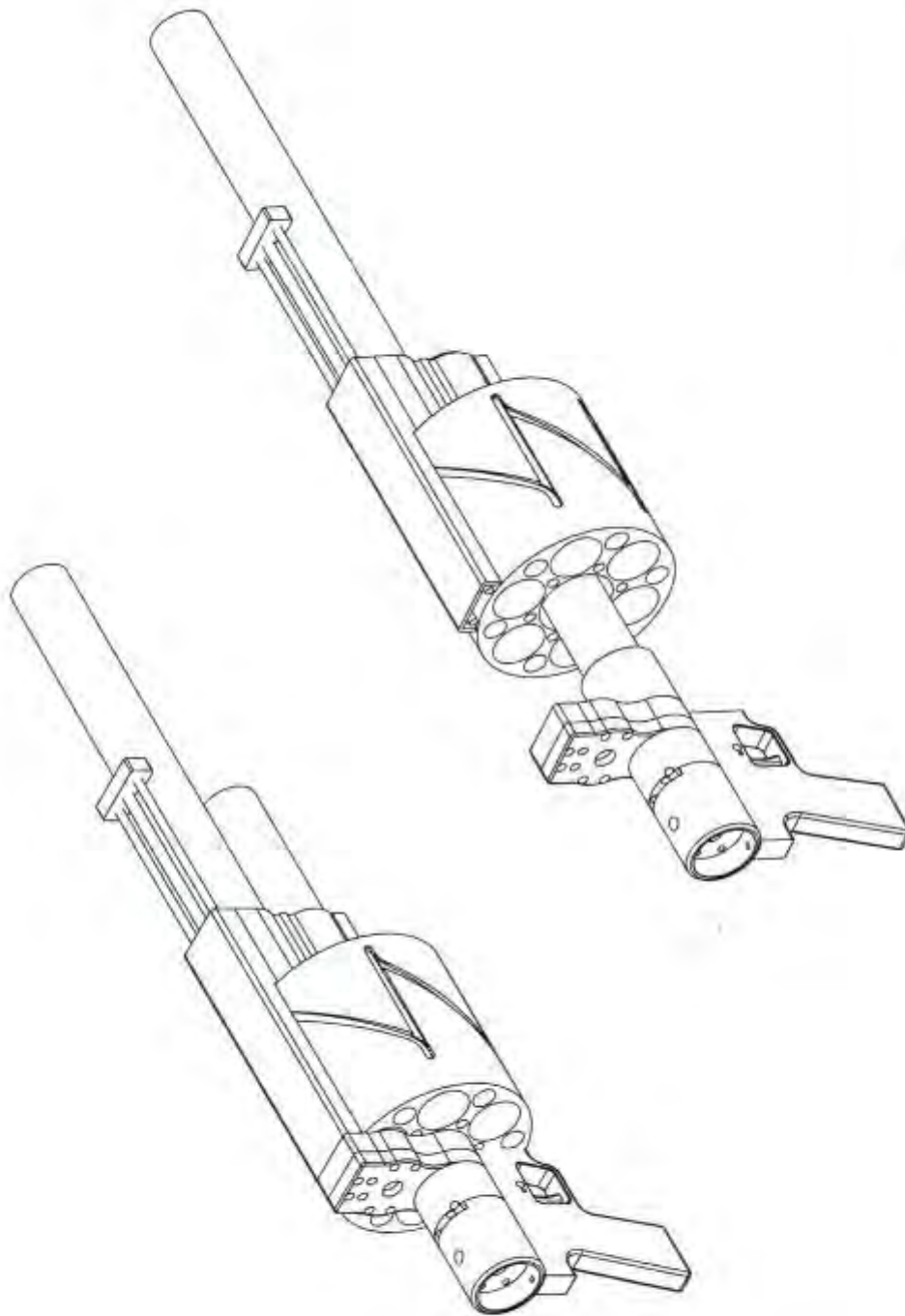
The Eclipse launcher and its ammunition have been designed to be an efficient and safe alternative to pyrotechnic rounds currently fielded by law enforcement which use either a .38 caliber or a 12 gauge shotgun blank to propel the payload. Rounds of this nature are intended for use at 100 feet from the target and do not allow for the velocity of the projectile to be adjusted which has led to a number of blunt impact trauma injuries at close range. The ability of the Eclipse to instantly reduce the velocity of the projectile will help reduce injuries that are common in close range encounters with other less-lethal launchers. Another advantage is that unlike pyrotechnic rounds, the Eclipse is safe for use in highly flammable environments which can be created by non-faser safe gas dispersal munitions used in riot control situations.

The launcher employs a pneumatically powered cam drive to index the receiver to the next available round of ammunition. Because of this, unlike other launchers, the Eclipse does not require winding or manual operation to index, making reloading faster.

Sound decibel levels of the Eclipse launcher are considerably lower and no muzzle flash is produced. Both these features increase stealth and safety over conventional launchers.

Because the Eclipse launcher is an air powered, non-lethal, non-pyrotechnic device, it is not considered a firearm or destructive device. Originally designed for launching paintballs, T-Shirts, safety lines and fire suppressant, the U.S. State department has declared this device is not regulated by any ITAR.

Department of the Treasury Bureau of Alcohol, Tobacco, and Firearms Washington, DC 20226  
As defined in section 921(a) (3) of Title 18, United States Code (USC) the term "firearm" means – \* (A) any weapon (including a starter gun) which will or is designed to or may readily be converted to expel a projectile by the action of an explosive; \* (B) the frame or receiver of any such weapon; \* (C) any firearm muffler or firearm silencer; or \* (D) any destructive device. Such term does not include an antique firearm. As defined in 26 USC subsection 5845(f) (2) the term destructive device includes any type of weapon by whatever name known which will, or which may readily be converted to, expel a projectile by the action of an explosive or other propellant, the barrel or barrels of which have a bore of more than one-half inch in diameter, except a shotgun or shotgun shell which the Secretary or his delegate finds is generally recognized as particularly suitable for sporting purposes; and (3) any combination of parts either designed or intended for use in converting any device into a destructive device as defined in subparagraphs (1) and (2) and from which a destructive device may be readily assembled. **The term 'destructive device' shall not include any device which is neither designed nor redesigned for use as a weapon; any device, although originally designed for use as a weapon, which is redesigned for use as a signaling, pyrotechnic, line throwing, safety, or similar device.**



SIZE DWG. NO. REV

Eclipse Launcher Assy

SCALE: 1:4 WEIGHT: SHEET 1 OF 2.

1

2

3

4

5

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# military

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Engineered & Manufactured by Sprung Instant Structures



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Helicopter hangars

Vehicle maintenance



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Access control point shelters



Optional insulation packages using 8" fiberglass



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# military

## CASE STUDIES



### MRAP VEHICLE MAINTENANCE FACILITIES — IRAQ

In January 2008, Sprung Instant Structures was called upon to provide the US military MRAP (Mine-Resistant, Ambush-Protected) program with an immediate solution for vehicle maintenance facilities at eight military bases in Iraq. Sprung mobilized operations and delivered 11 structures totaling 255,000 square feet within the four to six weeks delivery requirement.

*"Our past experience with Sprung structures has been excellent. The Sprung's simplicity belies its sophisticated design. We've looked at other temporary structures in the marketplace, however none of them offer the attributes of the Sprungs, such as the excellent design, structural integrity, and low-maintenance. The double panel rolling doors on our structures have worked flawlessly in this environment, which says and means a lot.*

*Although the fabric membrane is tough, accidents do happen and damage does occur: when damaged, small holes can be easily patched. In the event a section needs to be replaced, the Sprung's modular design allows for cost-effective repairs. By replacing only the damaged section/panels, many of the competing designs are more tent-like and are made-up of large fabric sections that when damaged, would be more costly to replace.*

*Another significant attribute of Sprung is the great customer support they provide and the benefit of having on-site technical support during installation. The support they provided during installation of our 11 MRAP Sprungs was simply outstanding, and it provided peace of mind that the installation would be accomplished correctly."*



### FORT BLISS MODULARITY PROGRAM — FORT BLISS, TX

Fort Bliss, one of DOD's flagship installations, comprised of state-of-the-art training areas, ranges and facilities has recently erected several Sprung structures as part of the modularity program.

The project includes five 70' x 160' Sprung structures utilized for vehicle maintenance; a 90' x 255' dining hall that connects into two 90' x 60' queuing areas where the troops line-up for meals. In addition, Sprung structures include a 70' x 115' vehicle maintenance facility at the McGregor Range, and a 60' x 100' warehouse.

In addition to speed of construction, the engineered relocatable design of the Sprung structure with its ability to relocate and reconfigure became the critical features in determining the right product of choice for Fort Bliss.



Sprung Instant Structures, Inc.  
5711 West Dannon Way  
West Jordan, Utah 84081

Toll Free: 1 800 528.9899  
Direct Dial: 801 280.1555  
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*Maintain communication  
and coverage when it  
matters most.*

*With 4,800 deployments and counting, the Sprint Emergency Response Team has worked for over 700 public sector and enterprise agencies across the country, 40 presidentially declared disasters, 11 national security events and dozens of hurricanes.*





## Special security initiatives

### **DC Sniper Task Force**

For three weeks in the fall of 2002, residents of DC's metro area feared carrying out basic tasks of commuting, shopping and even going to the gas station. Random victims were being taken by the DC sniper. A task force of 10 federal, state and local agencies descended on the area to stop him. However, their diverse radio systems didn't allow them to talk to one another. Sprint deployed 600 mobile devices, wireless sites and seamlessly embedded personnel into task force headquarters so Sprint Direct Connect™ devices could serve as the primary means of interoperable communications. Then, one night at a quiet highway rest stop, a tactical team ended the nightmare when the coordinated "go" order was heard across Sprint Direct Connect.

### **Sprint Emergency Response Team**

Sprint maintains an Emergency Response Team (ERT) to establish self-supported, interoperable mobile communications for public sector and corporate users almost anywhere, anytime. Sprint ERT personnel, many with extensive military and public safety communications experience, use a system of Satellite Cell on Light Trucks (SatCOLTs™) to deploy wireless sites carried on a Ford F650 Super Duty chassis. Once deployed, these mobile base stations are technically and functionally indistinguishable from any other base station transmitter in the Sprint network.

Since 2002, the twenty-one vehicle ERT SatCOLT™ fleet from Sprint has carried more than 30 million minutes of use for first responders and corporations during hurricanes, terrorist events and other emergencies when agency and corporate networks were destroyed, overwhelmed or otherwise unavailable. Sprint has responded to more than 4,800 major emergencies and national events in just the last 10 years, deploying more than 100,000 mobile devices, data cards, wireless sites and SatCOLTs.

Sprint ERT has worked alongside public safety and private organizations to be the primary provider of critical communications: from wildfires on one coast to hurricanes on the other; from floods and train derailments in the Northwest to deep freezes and power outages in the Midwest. For nearly a decade, first responders and corporations at every level have turned to ERT. Sprint has also provided communications support and response to large pre-planned events, such as the Presidential Inauguration, the Democratic and Republican political conventions, the G8 Summit and the Super Bowl. Those responsible for all-hazards planning throughout the country rely on Sprint as the communication provider for their emergency, special event and short-term communications needs.

### **Space Shuttle Columbia Recovery**

On an otherwise bright February day in 2003, the nation again stood stunned as the Space Shuttle Columbia returned to earth scattered in tiny pieces over miles and miles of rural Texas terrain. The federal government immediately established an independent investigating board. The Columbia Accident Investigation Board (CAIB) consisted of expert military and civilian analysts from multiple agencies to investigate the accident. In order to determine the cause, investigators needed to recover as much debris as possible from the shuttle's re-entry path, a 60 mile swath of territory running through a largely unpopulated area from east of San Francisco, California, to Lafayette, Louisiana. Through the recovery process, Sprint enabled coordinated group connectivity for the federal, state and local agencies involved by deploying 800 mobile devices, even in areas without a communications infrastructure by deploying three of its wireless sites.

### **Virginia Manhunt**

On the morning of August 16, 2008, authorities commenced a multi-county search for Douglas Albert Jaccard, 58, who was suspected of shooting two neighbors and a sheriff's deputy fire to his neighbors' house. Virginia State Police Sgt. Michael Conroy said police were searching rural Wythe and Pulaski counties. Houses in the area were evacuated. Five schools in Wythe County were locked down. As law enforcement authorities from around the state converged on the area, they realized they had no coverage and could not communicate. The Virginia Department of Emergency Management leveraged the Sprint ERT to deploy wireless and emergency dispatch-capable radio communications equipment. With communications restored, the Wythe County Sheriff's Office apprehended the man on August 19. He was charged with capital murder, malicious wounding, arson, breaking and entering and other charges.





## Government affairs

### **G8 Summit**

The world's most powerful heads of government attend the annual G8 Summit and large delegations from other nations often attend to observe discussions. In 2004, the G8 Summit extended invitations to a record number of leaders from 12 additional nations including Ghana, Afghanistan, Bahrain, Iraq, Jordan, Turkey, Yemen and Uganda. The event took place on Sea Island, Georgia, an island with undeveloped communications capabilities. Working from a nearly non-existent base of communications capacity, Sprint set up a new network for the world leaders, thousands of security personnel and other staff to provide essential wireless communications.

### **State and Local Elections**

Sprint has been called upon by election and campaign officials in California, Florida, Maryland, Ohio, Pennsylvania, Texas and other states to provide data and voice links, allowing election and campaign personnel to share information in near real-time, improving response time to election challenges and processes.

### **Funeral Services for Presidents Reagan and Ford**

The state funerals for Presidents Ronald Reagan and Gerald Ford posed significant logistical and communications challenges as dignitaries and citizens from across the country and around the world crowded the capital to see the deceased lay in state. More than 104,000 people at a rate of approximately 83 per minute paid their respects. To accommodate the increase of mobile communications activity for each event by both the public and public safety users, Sprint deployed thousands of mobile devices to dozens of agencies to communicate with one another, from federal law enforcement to the Michigan National Guard.



### **The 2009 Presidential Inauguration**

The unprecedented interest and attendance at the 2009 Presidential Inauguration created a need for heightened security and strategic coordination from federal, state and local law enforcement agencies. To ensure the reliability of mobile communications on January 20 and the days preceding, Sprint ERT provided additional wireless and IP coverage by deploying a SatCOLT. Working closely with public safety officials, Sprint ERT supplied hundreds of Sprint Direct Connect® devices and the Sprint ERT Go-Kit™, providing first responders with immediate access to mobile communications tools for emergencies, including fully-charged wireless and mobile broadband devices.

### **2008 Democratic and Republican National Convention**

Sprint ERT provided wireless communications and more than 2,000 handsets for the 2008 Democratic National Convention in Denver, Colorado and the 2008 Republican National Convention in Minneapolis, Minnesota. Sprint enhanced its network in the Pepsi Center, the Colorado Convention Center, INVESCO Field, Denver International Airport and the downtown business and hotel district. Sprint also helped man the Multi-Agency Communications Center (MACC), a 24-hour communications hub organized by the United States Secret Service.

### **2004 Democratic and Republican National Conventions**

In 2004, Sprint deployed multiple SatCOLTs and a total of more than 8,300 mobile devices for both the Democratic convention in Boston and the Republican convention in New York. Threats associated with the events, in addition to the complex security and road closures around the convention venues required additional communications support. For each convention-area deployment, Sprint ERT personnel served as integral components of the inter-agency command center, ensuring uninterrupted communications for more than 60 separate public safety organizations manning the events.

## Natural disasters

### **Hurricane Ike**

In 2008, Hurricane Ike killed more than 100 Americans and caused more than \$24 billion in damage. Sprint ERT received dozens of requests from first responders, local government and businesses in the impacted area. "We have deployed 15 Sprint Direct Connect devices into the field to key officers and school administrators, and they are already proving to be more reliable and dependable in most areas as we make key safety decisions and work through the recovery process," said Alan Bragg, Chief of Police, Spring Independent School District Police Department, Harris County, Texas. "We have utilized the devices in many locations and have obtained excellent communications results."

### **Hurricanes Katrina, Dennis, Rita and Wilma**

Sprint served as the primary provider of critical communications following devastating hurricanes in 2005. Sprint enabled responders to save countless lives, making possible air-to-ground communications helping the direct rescue of those in peril. Sprint deployed five of its SatCOLTs and more than 7,600 units to multiple states to be utilized by key leaders of all branches of government and more than 75 agencies including the Department of Defense. Sprint enabled the coordination of the only interoperable communication system for thousands of responders and law enforcement officers from around the country.

## Major events

### **Winter Olympics**

With five million attendees and tens of millions of people watching around the world, the 2002 Winter Olympics demanded intense communications infrastructure support. More than 90 federal, state and local agencies were charged with providing world-class safety and security to provide a smooth and worry-free experience for athletes and visitors around the globe. Sprint deployed more than 4,000 units, personnel and wireless sites in 14 locations in five cities to help these agencies accomplish their mission.

### **Sprint Emergency Response Team**

Toll Free: 1-888-639-0020

[ERTrequests@sprint.com](mailto:ERTrequests@sprint.com)

[www.sprint.com/ert](http://www.sprint.com/ert)

### **California Wildfires**

In October 2007, California wildfires began burning across Southern California destroying at least 1,500 homes, killing nine people and injuring 85 others, including at least 61 firefighters. Sprint provided support to those battling the 500,000-acre wildfires in California and nearby states. During several periods in 2007, Sprint operated multiple SatCOLTs and deployed nearly 1,000 mobile devices to allow responders from California and those responding from other states to have real interoperability and coordination for multiple fire incidents in several regions.

### **West Virginia Mine Explosion**

At the site of the West Virginia Mine Explosion that occurred in April of 2010, its topography and rural location caused communications coverage to be severely limited, hampering rescue / recovery operations. The Sprint ERT deployed a SatCOLT and provided a bubble of coverage to the rescue drilling operations. In addition to the SatCOLT, the ERT also deployed 100 ruggedized mobile devices and personnel to provide communications support during the rescue operations at the remote mine location.

### **Gulf Coast Oil Spill**

On April 20th of 2010, the Gulf Coast was effected by the largest oil spill recorded in U.S. history. As the clean-up efforts began, a Command Post (which hosted 4 helicopter pads, a reconnaissance and information disbursement facility, buoy deployment, repair and a decontamination center) was constructed in Breton Sound and had limited communications coverage due to its remote location. At the request of a major oil company, the Sprint ERT deployed a SatCOLT and personnel at the Breton Sound Command Post. These assets provided critical voice and data communications services which were imperative to the six-month clean-up.

### **Papal Visit**

Pope Benedict XVI visited the United Nations and the United States in April 2008. Hundreds of thousands of people turned out in New York City and Washington, D.C. to celebrate the event. The pope met with the President on the South Lawn of the White House and offered mass to tens of thousands at Nationals Park. On the final day of his pastoral visit to the U.S. in New York City, more than 60,000 people crowded Yankee Stadium for Mass. Sprint provided SatCOLTs and over 500 mobile devices to public and private organizations to provide communication both in Washington, D.C. and New York City.





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Dismounts Tethered to Vehicles



Dismounted Patrols

## Tactical Cross Domain Solution (TACDS™)

Enabling Information Sharing at the Tactical Edge





## Tactical Cross Domain Solution (TACDS™)

### Benefits

Low SWaP • Rugged Tactical Environment • Easily Managed by Tactical Edge Users • Non-Controlled Item Management • Alternate Interface Options • Integral WiFi802.11, 3G or 4G cellular modem option

### Applications

Automated Sense & Respond Logistics • Use Classified Networks to Pass Unclassified Autonomic Logistics Data • Pass Situational Awareness Info to/from the Tactical Edge • Joint & Coalition Information Sharing • Individual Soldier Health & Status • Every Soldier is a Sensor

### Technical Characteristics

Advatech Pacific has developed a low cost, lightweight, bi-directional, **Tactical Cross Domain Solution (TACDS™)**. TACDS is a production ready, rule based CDS that executes user programmable rule sets. Through its two rule sets (one rule set for each direction), TACDS provides automated data content inspection and message filtering in both directions between two security domains. TACDS rules selectively pass, block or change entire messages or individual data fields within each message.

TACDS enables seamless tactical data communication across different security domains while maintaining network security for each. For example, TACDS allows tactical edge users to receive specific, relevant situational awareness information without compromising the overall

security of the Common Operating Picture (COP), associated intelligence data, and methods it might contain. TACDS' robust, automated filtering and packet inspection reduces manpower and improves data timeliness by eliminating the manual, error-prone, "man in the middle" operation.

TACDS can be tailored to end user's needs through its programmable rule sets. Its small Size, low Weight and Power (low SWaP) and ruggedized, tamper-resistant packaging make it ideal for tactical edge applications and can be easily configured for man portability.

As part of the USMC Autonomic Logistics (AL) Program, TACDS is undergoing full certification and accreditation.

### Physical Characteristics

- Dimensions: 7 in. x 4 in. x 1.75 in.
- Weight: 2 lb
- Power: 10 watts
- Compliant with MIL-STD-810G Environmental Specifications
- Compliant with MIL-STD-1275D DC Power Specifications
- MIL-STD-461F EMI / EMC Compliant
- Multiple IO options available
  - 10 / 100BT Ethernet
  - RS-232 / 422
  - USB 2.0
  - CANbus (special order)
  - IEEE-802.11b/g Wireless Access Point (special order)
  - 3G / 4G Cellular modem (special order)

### Functional Characteristics

- Rule-Based Automatic Message Content Filtering
- Full Bi-Directional Guard
- No Impact on Existing Network Encaves
- Hardware Enforced Domain Separation
- Encrypted Storage of Rule Sets & Audit Logs
- Remote Management Capable
- Integrate 3rd Party Applications on High or Low Side Processors (Linux)
- Anti-Tamper / Device Zeroization Built In
- Secure Boot Load Upon Power Up
- Full Content Filtering of MIL-STD-6017B Variable Message Formats
- Rule Sets Programmable with Windows-Based GUI Tool Set

For more information, please contact:

TACDS@AdvatechPacific.com  
or call (909) 307-6218 X385  
www.AdvatechPacific.com



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# ATEM - Advanced T&E Mechanism

- Integrated T&E - no more lost or discarded T&Es
- Training commonality with ground mounted systems (M192 and M205) - TRAIN AS YOU FIGHT!
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- Two-handed weapon operation - perform rapid bold adjustment while keeping both hands on the weapon
- Rapid and precise target acquisition and repeatability with 1 mil fine adjustment capability
- Reduced risk of collateral damage with more precise fire control
- Proven combat track record with sister M192 T&E



ATEM is an integrated Traverse and Elevation (T&E) Mechanism for vehicle mounted weapon systems. In addition to the standard features found on the ground mounted T&Es (M192 and M205), the ATEM gives the warfighter rapid bold fire control with two-handed operation of the weapon using a weapon mounted remote T&E handle. This allows the warfighter faster target engagement with reduced risk of collateral damage. ATEM also provides training commonality whether mounted or dismounted, allowing the warfighter to train and fight with the same system.

ATEM



M205



M192



Capco family of T&E mechanisms for weapon mounted systems



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- Over 12 MM Impulse Cartridges produced. Supplier to the US Navy and Air Force.

- Privately-owned small business located in Grand Junction, Colorado.
- Founded in 1958.
- Prime Contractor to the US Navy, Air Force and Army for the past 20 years.
- Prime contracts including machine gun mount systems, small arms and machine gun components, bomb fin assemblies, energetic devices, electronic components and assemblies.
- 100,000 SQ. Ft. of manufacturing space on 10 acres with 180 employees.
- Class 1.1A Explosives handling, fabrication and test capabilities.





### M192 Lightweight Ground Mount

- CAPCO designed tripod for the US Army
- 30% weight reduction over legacy mount
- Low profile
- One-handed T&E operation
- Over 40,000 produced
- Winner of the 2005 Soldier's Choice Award



### XM205 Heavy Machine Gun Tripod

- CAPCO designed through IR&D funding
- 33% weight reduction over the legacy mounting system (M3)
- Decreased System Dispersion
- One-handed operation of Traverse & Elevation Mechanism



HMG & GMG mounts



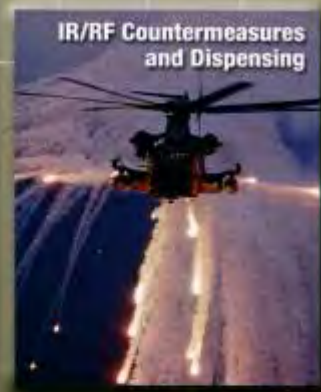
Stores Release CADs



ISO 9001:2008  
Quality  
System



The CAPCO ATEM System



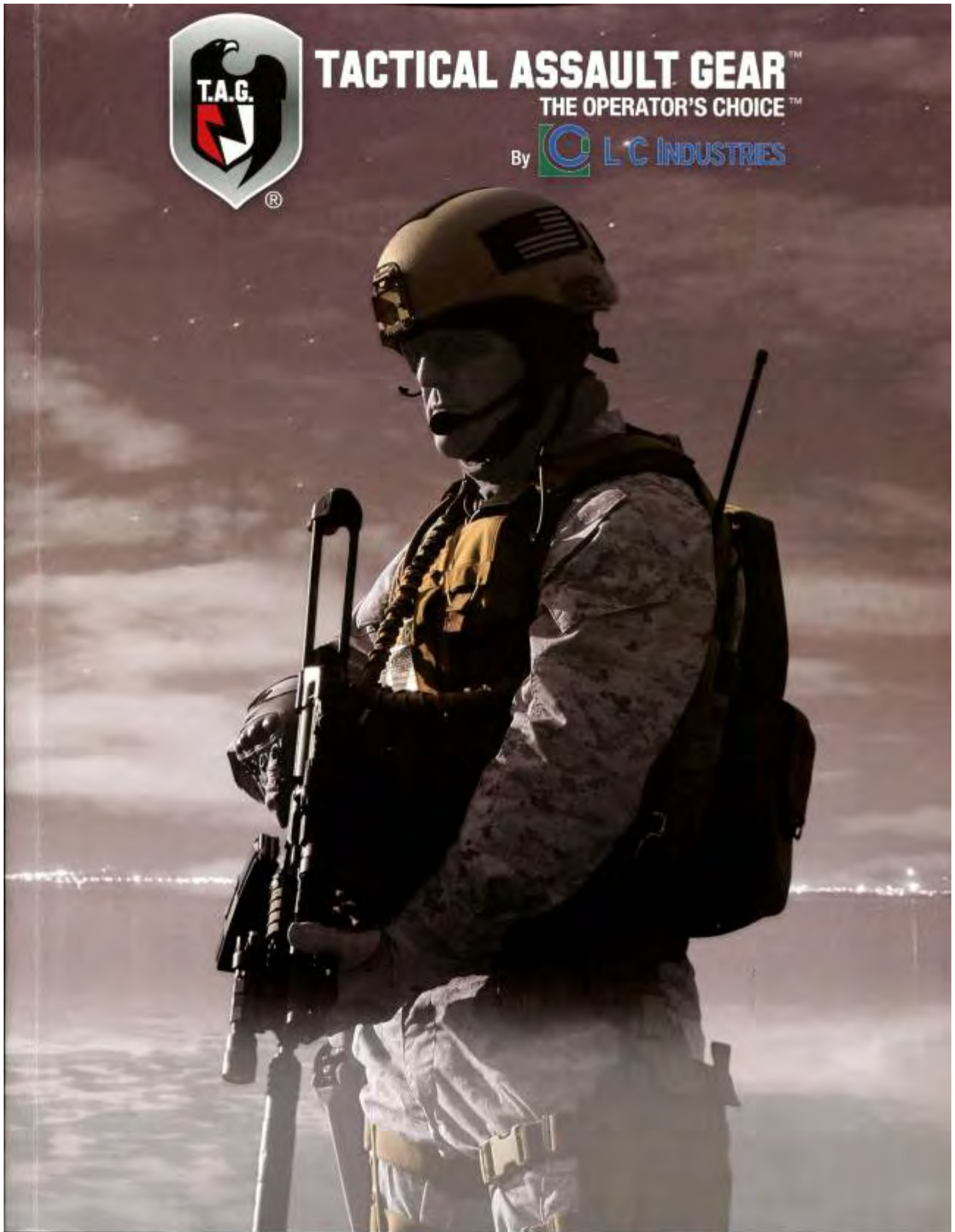
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Bomb Fin Assemblies



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THE OPERATOR'S CHOICE™  
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**TAG's** armor provides maximum protection at an affordable price. These armor panels are offered in NIJ Standard-0101.06, Ballistic Resistance of Body Armor, the latest evolution in standards by which law enforcement protective vests are measured. NIJ .06 compliant armor ultimately means increased protection for you. It means that you are wearing the most current and state-of-the-art soft armor available.

Test Projectile	V-50 FPS	Avg. BPS in MM
357 SIG	1738	33
24 MAG	1601	41
Weight (lb/Sq Ft)	1.45	N/A

**Rampage Soft Armor: Front Panel, Back Panel and Cummerbund**

Sizes: One size fits all

COLOR	ITEM #	P/N
N/A	012383	FRNGL3A

**MSRP \$384.95**



100% woven Aramid fiber.

Seam sealed ripstop pad cover protects ballistic materials from contaminants

**Rampage Armor Carrier**

The Rampage Armor Carrier is a light weight plate carrier. The carrier is fully adjustable and comes in (2) sizes. The Rampage has a wrap around cummerbund that has MOLLE webbing on the inside and outside portions. This gives you the ability to add pouches to the inside of your cummerbund freeing up space for your full load out. The shoulder straps have small built in padding for added comfort. The carrier is designed to also accept soft armor in the front, back and cummerbund (sold separately) providing you with a compact, light weight full coverage armor carrier. TAG offers an NIJ certified to .06 standard Level IIIA soft armor ballistic package for the Rampage. Made using 500 weight nylon to help minimize the overall weight.

**Weight:** Carrier (no armor) 2lbs. 11oz.

Carrier with Level IIIA soft armor package 7lbs. 3oz.

**Please Note:** armor not included, sizing is based on plate size not body size.

COLOR	ITEM #	P/N	DESCRIPTION
ABU	014325	CPH2-ABU	SM/MD
ARMY ACU	012381	CPH2-ACU	SM/MD
A-TACS	013804	CPH2-AS	SM/MD
BLACK	012378	CPH2-BK	SM/MD
COYOTE TAN	012379	CPH2-CT	SM/MD
MULTICAM	012382	CPH2-MC	SM/MD
RANGER GREEN	012380	CPH2-RS	SM/MD
ABU	014328	CPH5-ABU	LG/XL
ARMY ACU	014558	CPH5-ACU	LG/XL
A-TACS	014568	CPH5-AS	LG/XL
BLACK	014560	CPH5-BK	LG/XL
COYOTE TAN	014562	CPH5-CT	LG/XL
MULTICAM	014564	CPH5-MC	LG/XL
RANGER GREEN	014566	CPH5-RS	LG/XL

**MSRP: \$187.95** (Carrier Only)

**MSRP: \$572.90** (Soft Armor and Carrier)



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**Rampage Releasable Armor Carrier**

The RAMPAGE releasable armor carrier is the best on the market. The three wire quick release system is the finest in the world. The Rampages unique patent pending system allows the carrier to be removed from you in seconds. If you are looking for security, safety, load carry capability, ease of use with superior protection in a tactically advanced system, the RAMPAGE releasable carrier is the solution.

TAG's Releasable Rampage Carrier is a split front carrier designed so you can have one side closed allowing you to take it on and off with ease. The Level IIIA soft armor that works with this carrier is a TAG exclusive made by Valley Operational Wear, LLC and is certified to the .06 Standards. The soft armor package comes with the front, back, and cummerbund armor. The carriers plate pocket will fit any plate size small through X-large. Comes complete with 6x6 ice plate pockets as well. The shoulders and upper portion of the carrier is covered with non slip rubberized nylon. Made in the USA. Lifetime warranty

**Please note:** armor not included, sizing is based on plate size not body size.

COLOR	ITEM #	P/N	DESCRIPTION
NAVY	814926	CPH3-ABU	SM/M/D
ARMY/ACU	812452	CPH3-ADU	SM/M/D
KTACE	813885	CPH3-AS	SM/M/D
BLACK	812449	CPH3-9K	SM/M/D
OPHTL/WW	812450	CPH3-CT	SM/M/D
MULTICAM	812453	CPH3-MC	SM/M/D
RANGER GREEN	812451	CPH3-PG	SM/M/D
NAVY	814927	CPH4-ABU	LG/XL/E
ARMY/ACU	812486	CPH4-ADU	LG/XL/G
KTACE	813886	CPH4-AS	LG/XL/G
BLACK	812956	CPH4-BK	LG/XL/G
OPHTL/TAN	812485	CPH4-OT	LG/XL/G
MULTICAM	812487	CPH4-MC	LG/XL/G
RANGER GREEN	812959	CPH4-PG	LG/XL/G

**MSRP: \$473.95** (Carrier Only)

**MSRP: \$858.90** (Soft Armor and Carrier)

**OPERATOR Releasable LE/SWAT Armor Carrier**

The OPERATOR is Shellback Tactical's first releasable armor carrier. This advanced armor carrier was designed specifically to accommodate the needs of Law Enforcement and SWAT tactical teams. Integrated with TAG's advanced release system, allows it to easily be removed and cut away from both shoulders as well as the back releasing the cummerbund. If you are looking for a great releasable armor carrier that integrates advanced features, load carry capability, comfort, mobility and ease of use with great coverage and protection the OPERATOR releasable armor carrier is the solution.

The split front carrier is designed to carry level IIIA soft armor and the plate pockets will accept any size rifle plate small thru large long. A soft armor package is available and comes complete with the front, back, and cummerbund armor. The carrier comes complete with 6x6 side plate pockets as well. Made in the USA. Lifetime Warranty.

COLOR	ITEM #	P/N	DESCRIPTION
BLACK	817356	SBT-OPER1-BK	SM/M/D
RANGER GREEN	817357	SBT-OPER1-PG	SM/M/D
BLACK	817358	SBT-OPER2-BK	LG/XL
RANGER GREEN	817359	SBT-OPER2-PG	LG/XL

**MSRP: \$473.95** (Carrier Only)

**MSRP: \$858.90** (Soft Armor and Carrier)





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ARMOR & CARRIERS



**Slick Plate Carrier**

Tactical Assault Gear's Slick Plate Carrier is made to fit Level 3 or 4 trauma plates, the Rampage soft armor and 6"x6" hard side plates. The carrier can be stripped down and used without the side plate pockets. The Rampage soft armor fits inside this carrier. The carrier is fully adjustable and made in the USA. Lifetime Warranty.

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814904	SPC1-ABU	
A TACS	813291	SPC1-A5	
CODOTE TAN	813288	SPC1-CT	One Size Fits All
MULTICAM	813290	SPC1-MC	
RANGER GREEN	813292	SPC1-RG	

**MSRP: \$124.95**



**Havoc Armor Carrier**

Tactical Assault Gear's Havoc Armor Carrier is designed to carry the SPEAR / BALCS cut soft armor. The Havoc has TAG's fully adjustable plate pocket on the inside that is designed to carry small thru X-Large ballistic plates. The Havoc also has 6"x6" side plate pockets on the inside of the carrier. This will allow you to be completely protected while providing you with a low profile lightweight carrier. The Havoc is made with 500 denier nylon and lined with fire retardant mesh. The Havoc has attachment points for groin and deltoid armor. Made in America.

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814917	HAC11-ABU	MD
BLACK	812386	HAC11-BK	MD
CODOTE TAN	812387	HAC11-CT	MD
MULTICAM	812389	HAC11-MC	MD
RANGER GREEN	812388	HAC11-RG	MD
ABU	814918	HAC12-ABU	LG
BLACK	812390	HAC12-BK	LG
CODOTE TAN	812391	HAC12-CT	LG
MULTICAM	812393	HAC12-MC	LG
RANGER GREEN	812392	HAC12-RG	LG
ABU	814919	HAC13-ABU	XL
BLACK	812394	HAC13-BK	XL
CODOTE TAN	812395	HAC13-CT	XL
MULTICAM	812397	HAC13-MC	XL
RANGER GREEN	812396	HAC13-RG	XL

**MSRP: \$110.95**



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ARMOR & CARRIERS



**NEW  
FEATURES**



**NEW  
PRODUCT**

**Aggressor Armor Carrier**

Shellback Tactical's AGGRESSOR Armor Plate Carrier is made to accommodate your existing soft armor turning it into a Tactical vest/outer carrier. Internal adjustable front and back plate pockets are built in. A drag handle has also been added. Used by the Los Angeles Police Department in their MACTAC anti-terrorist program. Made in the USA. Lifetime Warranty.

COLOR	ITEM #	P/N	DESCRIPTION
BLACK	812786	SBT-AGR1-BK	SM/MO
RANGER GREEN	814491	SBT-AGR1-RG	SM/MO
BLACK	812887	SBT-AGR2-BK	LG/XL
RANGER GREEN	814490	SBT-AGR2-RG	LG/XL

**MSRP: \$155.95**



**Combat Aggressor Armor Carrier**

The COMBAT AGGRESSOR Armor/Plate Carrier is here. This carrier similar to the original AGGRESSOR has been modified into a combat model due to many requests. Ideal for Military and Law Enforcement. This difference between this new version and the regular AGGRESSOR is that the non-slip material has been removed from the shoulder area and the spacer mesh has also been removed giving you one solid color carrier. Interior has integrated/adjustable rifle plate pockets front and back. A new Drag Handle has also been added. Made in the USA. Lifetime Warranty.

COLOR	ITEM #	P/N	DESCRIPTION
COYOTE TAN	820847	SBT-CAGR1-CT	S/M
RANGER GREEN	820848	SBT-CAGR1-RG	S/M
COYOTE TAN	820849	SBT-CAGR2-CT	L/XL
RANGER GREEN	820850	SBT-CAGR2-RG	L/XL

**MSRP: \$155.95**



*New Drag handle just added for  
The Aggressor and Combat Aggressor*

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ARMOR & CARRIERS



**NEW  
FEATURES**

### Banshee Rifle Plate Carrier

The BANSHEE Rifle Plate Carrier was designed to meet and exceed the needs of the operator. If you are an Operator, Military and Law Enforcement alike who needs a high quality carrier that has great load carrying capacity in a compact lightweight design the BANSHEE is for you. The Shoulders on the BANSHEE rifle plate carrier are fully adjustable and padded with a new advanced design feature not seen in other rigs. The shoulder area's once adjusted slides into itself and locks in securely with a hidden quick release buckle. On the shoulders are 2 rows of PALS webbing with elastic nylon sewn in between the PALS webbing allowing for comms or hydration tubing to be ran through.

The front and back of the BANSHEE are identical and feature 5 rows of PALS webbing and two 2 inch rows of loop sewn on for flags and other identifiers. The sides of the rig have fully adjustable nylon strapping with a quick release buckle and the front and back of the panels are also padded. The rifle plates are loaded from the bottom front/back and secured with a hook/loop closure.

**\*\*NEW DESIGN AND UPDATE\*\***

Now with a removable Cummerbund. A wrap around Cummerbund Closure runs through the rig, is fully adjustable (one size fits most) and has PALS webbing. The Cummerbund if not needed can also be removed, and the rig can continue to be secured by the quick release buckles. The front of the Plate Carrier also has a hook and loop pocket to allow for accessories.

Will accept 10x12 Level 3 and 4 ESAPI OR SIMILAR PLATES. Made in the USA. Lifetime Warranty.

COLOR	ITEM #	P/W	DESCRIPTION
A-TACS	814777	SRT-BANRF-AS	
BLACK	814775	SRT-BANRF-BK	
COYOTE TAN	814774	SRT-BANRF-CT	One Size Fits All
MULTICAM	814776	SRT-BANRF-MC	
RANGER GREEN	814773	SRT-BANRF-RG	

MSRP: Carrier Only: **\$135.95**



*A drag handle has been added.  
We have also added interior PALS  
webbing to the interior of the  
removable cummerbund allowing  
you to molle in side plates.*

### Plate Carrier

Tactical Assault Gear's Hard Plate Carrier will accommodate any level 3 or 4 trauma plate. The pocket for the plates will keep your plates covering your vital areas regardless of the size of your plates. Our plate carrier can accommodate small through large long plates. The shoulder pads are removable and curved to stay away from your neck for added comfort. Built in side plate pockets are 7" H x 6.5" W. Fully adjustable, one size fits all. Guaranteed for life, and made in the United States.

COLOR	ITEM #	P/W	DESCRIPTION
A-TACS	813425	CPH1-AS	
ARJ	815824	CPH1-ARJ	
ARMY ACU	817349	CPH1-ACU	
BLACK	812345	CPH1-BK	One Size Fits All
COYOTE TAN	812347	CPH1-LT	
MULTICAM	812350	CPH1-MC	
RANGER GREEN	812348	CPH1-RG	

MSRP **\$155.95**



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VESTS & CHEST RIGS



**NEW  
PRODUCT**

### Xerxes Gunner Chest Rig

Tactical Assault Gear's Xerxes Chest Rig was designed in mind for the Gunner who needs the extra support when carrying heavy loads and ease of donning when getting in and out of vehicles. The whole rig is padded with foam and a sternum strap for ride comfort. There are two heavy duty COBRA buckles in the front of the rig where you can split open for donning or laying down on the ground in the prone position. This Rig can be set up in any configuration by using MOLLE pouches. The rear platform is large enough to fit either a 100oz or 50oz hydration bladder carrier. On the bottom of cummerbund pieces there are d-rings to hang gear from, and inside there are dual pistol holster sleeves for left and right handed draw.

COLOR	ITEM #	P/N	DESCRIPTION
ABU	820831	XGCR1-ABU	
ARMY ACU	820852	XGCR1-ACU	
A-TACS	820853	XGCR1-AS	
BLACK	820834	XGCR1-BK	One Size Fits All
COYOTE TAN	820835	XGCR1-CT	
MULTICAM	820856	XGCR1-MC	
RANGER GREEN	820857	XGCR1-RG	

**MSRP \$172.95**



### Vendetta Chest Rig

Tactical Assault Gear's Vendetta is made with 500 wt. Cordura nylon and will carry up to (8) 30 rd M16 style magazines. The Vendetta has (2) removable radio/utility pocket kits making this chest rig fully customized for your mission requirements. There are single rows of PALS webbing for attaching multiple types of MOLLE pouches to the front. The shoulder straps have multiple channels for hydration drinking tubes, and comm wires.

Made in the United States and backed with a lifetime warranty.

COLOR	ITEM #	P/N	DESCRIPTION
MULTICAM	816336	VCR1-ABU	
ARMY ACU	816337	VCR1-ACU	
A-TACS	816338	VCR1-AS	One Size Fits All
COYOTE TAN	816340	VCR1-CT	
MULTICAM	816341	VCR1-MC	
RANGER GREEN	816342	VCR1-RG	

**MSRP \$ 182.95**



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VESTS & CHEST RIGS



### Intrepid Chest Rig

Tactical Assault Gear's Intrepid Chest Rig is designed as a single platform for a full combat load out. This chest rig gives you the ability to carry (8) 5.56mm magazines, up to (4) pistol mags that are 9mm, 40cal, or .45 ACP using our universal pistol pouches. These are also great for multi tools or folding knives. You can run dual comms, carry (2) frag grenades, carry BA5590's, 7.62 ammo, or flash bangs. Center of the main body can be used to carry your pistol if desired. There is pile tape sewn to the magazine pouches so you can add the chemlight strips (good for 12 gauge shells as well) or tear them off when not needed. Chest rig comes with (5) removable strips. Radio pouches will hold PRC-148 and 152 models. Bottom of the pouches open up to allow you access to your battery, makes it easy to change it while it is still in the pouch. Fits easily over any plate carrier as well as full size armor carriers. Made in USA, lifetime warranty.

COLOR	ITEM #	P/N	DESCRIPTION
ABU	815203	ICR1-ABU	
ARMY ACU	812995	ICR1-ACU	
A-TACS	813144	ICR1-AS	
COYOTE TAN	813140	ICR1-CT	One Size Fits All
MULTICAM	812498	ICR1-MC	
RANGER GREEN	812494	ICR1-RG	

**MSRP: \$190.95**



### Rifeman Chest Rig

Tactical Assault Gear's Rifeman Chest Rig is specifically designed for today's operational requirements. The four (4) main pouches will hold three (3) M16/M4 30rd. Magazines. The two (2) utility pouches can hold a 200rd. S.A.W drum, 100rd. Box of M60/240 amm6, 2 quart canteen, NVGs, and small mission essentials. Two (2) Additional pouches for a GPS, and the MB/TR radio. #10 YKK coiled zipper for main compartment access. Behind the left utility pouch there is a slot for a large framed handgun with a retention strap that secures to the main body of the chest rig to keep the holster from falling out. Backed by a lifetime guarantee.

COLOR	ITEM #	P/N	DESCRIPTION
ACU	812334	CR1F01-ACU	
COYOTE TAN	812332	CR1F01-CT	
MULTICAM	812334	CR1F01-MC	One Size Fits All
RANGER GREEN	812333	CR1F01-RG	

**MSRP: \$243.95**

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**Gladiator Chest Rig**

Tactical Assault Gear's Gladiator is a low profile MOLLE compatible chest rig. Internal magazine pouches along the front with quick release tabs hold one (1) magazine each for a total of six (6). There are (3) pockets along the top edge to allow easy access to the storage compartment inside the cummerbund. The chest rig has padded shoulder straps for added comfort. The back of the vest has a built in hydration carrier with PALS webbing for additional MOLLE pouches if needed. This design is perfect for operators who want a lower profile chest rig. Backed with a lifetime warranty, and made in the United States.

COLOR	ITEM #	P/W	DESCRIPTION
ABU	814686	GCR1-ABU	
ARMY ACU	812359	GCR1-ACU	
A-TACS	813879	GCR1-AS	
BLACK	817266	GCR1-BK	One Size Fits All
COWBOY TAN	812357	GCR1-CT	
MULTICAM	812360	GCR1-MC	
RANGER GREEN	812358	GCR1-RG	

**MSRP: \$172.95**

**Marine Gladiator Chest Rig**

Tactical Assault Gear's Marine Gladiator Chest Rig was designed to give unit commanders down range more flexibility during different types of combat operations. Unit commanders can choose to have their troops wear different armor configurations depending on local threat assessments and mission types. From full armor carriers down to lighter plate carriers, this chest rig allows the units to quickly switch out their armor but still keep their full fighting load. Based on TAG's original Gladiator platform the Marine version has longer and thinner padded shoulder straps. A fold down bib for adding small admin type pouches. There are loops sewn into the body of the chest rig for hanging different items such as chemlights, carabiners, and retention lanyards. Shoulder straps and waist straps are fully adjustable and will fit on all body types with and without armor. Made in America, lifetime warranty.

COLOR	ITEM #	P/W	DESCRIPTION
ABU	815002	GCR2-ABU	
ARMY ACU	812337	GCR2-ACU	
A-TACS	813339	GCR2-AS	One Size Fits All
COWBOY TAN	815335	GCR2-CT	
MULTICAM	813338	GCR2-MC	
RANGER GREEN	813336	GCR2-RG	

**MSRP: \$182.95**



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VESTS & CHEST RIGS



**Phalanx Type 1**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814897	PLX1-ABU	
ARMY ACU	813331	PLX1-ACU	
A-TACS	813334	PLX1-AS	
BLACK	813329	PLX1-BK	One Size Fits All
COYOTE TAN	813332	PLX1-CT	
MULTICAM	813333	PLX1-MC	
RANGER GREEN	813331	PLX1-RG	

**MSRP: \$103.95**

**Phalanx Type 2 MOLLE**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	815307	PLX2-ABU	
ARMY ACU	816308	PLX2-ACU	
A-TACS	816309	PLX2-AS	
BLACK	816310	PLX2-BK	(One Size Fits All)
COYOTE TAN	816311	PLX2-CT	
MULTICAM	816312	PLX2-MC	
RANGER GREEN	816313	PLX2-RG	

**MSRP: \$150.95**



**Phalanx Family of Chest Rigs**

Tactical Assault Gear's Phalanx Family of Chest Rigs was born out of a need to provide Operators with multiple options using the exact same sized platform. This chest rig is a great solution for anyone where weight is a critical factor. Made with 500 w/1, nylon. Its the lightest most durable fabric currently being used for tactical gear that can still offer you strength and abrasion resistance that will last for years. The (4) center mounted pouches can hold any style M4 magazine including SCAR light magazines, M14 magazines, SR 25 magazines, and SCAR heavy magazines. The bungee retention straps can be adjusted to fit your particular magazine. At each end of the chest rig there are multiple radio and utility pouch configurations to fit your specific requirements. The radio pouches that fit the MBTR 148 and the 152, and for LE applications the type (4) has an MX5000 radio pouch. You can either run either a dual comms set up or remove the radio strap and use it as a holster if desired (thumb break is included). Small utility pouches are large enough to carry 100 rnd box of 7.62 ammunition, as well as a BA5590 battery, small pre-pack blow out kits, flash bangs, etc.... There are slots inside the Phalanx for tying gear and stowing chemlights. Shoulder straps are padded and have multiple routing channels for comm cables and antenna's. The bottom of each MBTR radio pouch opens up so you can remove the battery and change it without taking your radio out of the pouch. Made in USA, lifetime warranty.

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**Phalanx Type 3 Split Front**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	816314	PLX3-ABU	
ARMY ACU	816315	PLX3-ACU	
A-TACS	816316	PLX3-AS	
BLACK	816317	PLX3-BK	One Size Fits All
COWBOY TAN	816318	PLX3-CT	
MULTICAM	816319	PLX3-MC	
RANGER GREEN	816320	PLX3-RG	

**MSRP: \$114.95**

**Phalanx Type 4 Fury**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	816321	PLX4-ABU	
ARMY ACU	816322	PLX4-ACU	
A-TACS	816323	PLX4-AS	
BLACK	816324	PLX4-BK	One Size Fits All
COWBOY TAN	816325	PLX4-CT	
MULTICAM	816326	PLX4-MC	
RANGER GREEN	816327	PLX4-RG	

**MSRP: \$120.95**

**Chest Rig H<sub>2</sub>O System**

TAG's Chest Rig Hydration System allows the operator to quickly attach and detach an 100oz H<sub>2</sub>O bladder to all our chest Rigs except the Gladiators. This is a perfect way to add a Hydration to your rig without the need of any extra shoulder straps. It simply clicks into the buckles on the shoulders of the rig and uses the bottom waist strap to be securely tightened to the body. There is PALS webbing on the front of the pouch adding modular real estate to the back of your Rig as well as an identity Velcro strip.

COLOR	ITEM #	P/N	DESCRIPTION
ABU	820856	H2OCRI-ABU	
ARMY ACU	820857	H2OCRI-ACU	
A-TACS	820860	H2OCRI-AS	Size: Approximate
BLACK	820861	H2OCRI-BK	2.5" x 17.3"
COWBOY TAN	820862	H2OCRI-CT	100 oz (3 liter)
MULTICAM	820865	H2OCRI-MC	
RANGER GREEN	820864	H2OCRI-RG	

**MSRP: \$54.95**



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**Go Time Triple Mag Chest Rig**

Shelback's Go Time Triple Magazine Chest Rig can accommodate three .223/5.56 type mags in a low profile version. This design adds one more assault rifle magazine to your load out. It also allows you to add MOLLE compatible pouches to the front giving you more options. Made in USA, lifetime warranty.

COLOR	ITEM #	P/N	DESCRIPTION
A-TACS	816820	SBT-GT-TRP-AS	
BLACK	812793	SBT-GT-TRP-BK	
COYOTE TAN	812784	SBT-GT-TRP-CT	One Size Fits All
MULTICAM	814511	SBT-GT-TRP-MC	
RANGER GREEN	812796	SBT-GT-TRP-RG	

**MSRP: \$62.95**



**Go Time Chest Rig**

The Go Time Chest Rig was developed to allow a law enforcement officer to have a low profile chest rig with all the necessary equipment to combat and prevail in a dangerous active shooter situation.

**SPECS:**

- 1000 Cordura for durability
- Holds two .223/5.56 magazines
- Holds to handguns magazines (up to .45 cal double stacks)
- Quick detach system/One handed operation/Padded neck strap
- Interior pocket will fit 5x8 and 7x9 soft armor plates
- Design clears duty belt magazines and shouldering of your weapon is easy

COLOR	ITEM #	P/N	DESCRIPTION
A-TACS	814771	SBT-GT1-AS	
BLACK	812770	SBT-GT1-BK	
COYOTE TAN	812771	SBT-GT1-CT	One Size Fits All
MULTICAM	814302	SBT-GT1-MC	
RANGER GREEN	812772	SBT-GT1-RG	

**MSRP: \$75.95**





**Go Time Stacker Chest Rig**

The GO TIME Stacker chest rig has been designed and gone through numerous revisions to give it the ability to make lightning fast magazine changes on the move. The GO TIME Stacker chest rig is an ideal and discreet alternative to a full size chest rig or tactical vest giving you tremendous versatility. The GO TIME Stacker chest rig allows you to carry your needed ammo or accessories while maintaining a lower profile. This rig gives the user the ability to wear the GO TIME Stacker chest rig over body armor or covertly under a jacket. The interior pocket can be used as an admin pocket to store door stops, mirrors, maps, additional soft armor plates. Made from 1000 denier Cordura Nylon and heavy duty mil-spec webbing with quick detach buckles on the neck strap and wrap around strap.

The pouches on the GO TIME STACKER will accommodate the following: .223/ 5.56 AR-15/ M-4 type 30 round magazines- MAGPUL PMAGS (with or without Magpuls and Ranger plates), CAA countdown mags, Lancer L5 Translucent, HK SA80 mags, M4 magazines, Colt magazines, Thermolds, and any steel or aluminum type 30 round magazine variations.

Second row of pouches shown in picture not included with Stacker. Additional pouches sold separately.

**SPECS:**

- 1000 Cordura for durability
- 3 Rows of P.A.L.S. webbing across the front of the pouches
- Internal magazine retention system - Accommodate additional pouches
- Quick detach system/One handed operation/Padded curved neck strap
- Interior rear pocket will fit 5x8 and 7x9 soft armor plates.
- Design clears duty belt magazines and shouldering of your weapon is easy
- A.S.A.P. series tm
- Made in the USA
- Lifetime warranty

COLOR	ITEM #	P/W	DESCRIPTION
A-TACS	814772	SBT-STK-AS	
BLACK	814907	SBT-STK-BK	
COMBAT TAN	814904	SBT-STK-CT	One Size Fits All
MULTICAM	814909	SBT-STK-MC	
RANGER GREEN	814906	SBT-STK-RG	

**MSRP: \$62.95**



**Go Time 7.62 Mag Chest Rig**

The GO TIME 7.62 is a new product to the line and fills a void for those who carry something other than a .223/5.56 caliber magazine. The GO TIME 7.62 chest rig is similar to the GO TIME Triple Mag minus one row of PALS webbing. The GO TIME 7.62 chest rig is an ideal and discreet alternative to a full size chest rig or tactical vest giving you tremendous versatility. This rig gives the user the ability to wear the GO TIME 7.62 chest rig over body armor or covertly under a jacket. Designed for active shooter scenarios that require your equipment to rapidly deploy and adjust to the unfolding events. It allows you instant access to spare ammunition via the three sewn on 30rd M4 magazine pouches.

The GO TIME 7.62 model accommodates the following magazines- 7.62, AR-10, 308 type magazines, HK91, and M-1/M-14 Carbine.

**SPECS:**

- 1000 Cordura for durability
- 2 Rows of P.A.L.S. webbing across the front of the pouches
- Bungee pull tab retention system - Accommodate additional pouches
- Quick detach system/One handed operation/Padded curved neck strap
- Interior rear pocket will fit 5x8 and 7x9 soft armor plates.
- Design clears duty belt magazines and shouldering of your weapon is easy
- A.S.A.P. series tm
- Made in the USA
- Lifetime warranty

COLOR	ITEM #	P/W	DESCRIPTION
A-TACS	814772	SBT-GT762-AS	
BLACK	814907	SBT-GT762-BK	
COMBAT TAN	814908	SBT-GT762-CT	One Size Fits All
MULTICAM	814909	SBT-GT762-MC	
RANGER GREEN	814910	SBT-GT762-RG	

**MSRP: \$62.95**

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MOLLE



**MOLLE Pistol Mag 2 Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814943	MPM2-ABU	
ARMY ACU	811008	MPM2-ACU	
A TACS	813402	MPM2-AS	2 Wags
BLACK	812005	MPM2-BK	Size: approximate
COYOTE TAN	813401	MPM2-CT	3.5" x 4" x 2"
MULTICAM	812008	MPM2-MC	
RANGER GREEN	812008	MPM2-RG	

**MSRP: \$24.95**

**MOLLE Universal Pistol Mag Enhanced Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814079	MPU1-ABU	
ARMY ACU	812032	MPU1-ACU	
BLACK	812029	MPU1-BK	Single
COYOTE TAN	812030	MPU1-CT	Size: Approximate
MULTICAM	812032	MPU1-MC	2" x 6" x 1.5"
RANGER GREEN	812031	MPU1-RG	
ABU	814080	MPU2-ABU	
ARMY ACU	812133	MPU2-ACU	
A-TACS	817360	MPU2-AS	Double
BLACK	812131	MPU2-BK	Size: Approximate
COYOTE TAN	958262	MPU2-CT	4" x 6" x 3.5"
MULTICAM	813739	MPU2-MC	
RANGER GREEN	812132	MPU2-RG	
ABU	814981	MPU3-ABU	
ARMY ACU	812282	MPU3-ACU	
BLACK	812279	MPU3-BK	Triple
COYOTE TAN	812280	MPU3-CT	Size: Approximate
MULTICAM	812283	MPU3-MC	6.5" x 6" x 1.5"
RANGER GREEN	812281	MPU3-RG	

**MSRP: \$22.95** (Single)

**MSRP: \$29.95** (Double)

**MSRP: \$37.95** (Triple)

**MOLLE 7.62 4-MAG POUCH**

COLOR	ITEM #	P/N	DESCRIPTION
A-TACS	813417	MW142-AS	
BLACK	812183	MW142-BK	
COYOTE TAN	812184	MW142-CT	4 Mags (2)
MULTICAM	812187	MW142-MC	Size: Approximate
RANGER GREEN	812185	MW142-RG	7" x 7.5" x 2.5"
MULTICAM	812008	MPM2-MC	
RANGER GREEN	812008	MPM2-RG	

**MSRP: \$36.95**



**WITH OVER 250 VENDORS AND ACCESS TO WELL OVER 250,000 PRODUCTS WHY SHOP ANYWHERE ELSE? TAG CAN BE YOUR ONE STOP SHOP FOR ALL YOUR TACTICAL SUPPLY NEEDS!**



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**MOLLE M16 2-Mag (1) Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814972	MM161-ABU	
ARMY ACU	812017	MM161-ACU	
A-TACS	813404	MM161-AS	2 Mags (1)
BLACK	812014	MM161-BK	Size: Approximate
COYOTE TAN	812015	MM161-CT	3.5" x 7.5" x 2.5"
MULTICAM	812018	MM161-MC	
RANGER GREEN	812016	MM161-RG	

**MSRP: \$26.95**

**MOLLE M16 4-Mag (2) Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814973	MM162-ABU	
ARMY ACU	812023	MM162-ACU	
A-TACS	813405	MM162-AS	4 Mags (2)
BLACK	812018	MM162-BK	Size: Approximate
COYOTE TAN	812020	MM162-CT	7" x 7.5" x 2.5"
MULTICAM	812023	MM162-MC	
RANGER GREEN	812021	MM162-RG	

**MSRP: \$37.95**

**MOLLE M16 6-Mag (3) Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814974	MM163-ABU	
ARMY ACU	812027	MM163-ACU	
A-TACS	813406	MM163-AS	6 Mags (3)
BLACK	812024	MM163-BK	Size: Approximate
COYOTE TAN	812025	MM163-CT	9.5" x 7.5" x 2.5"
MULTICAM	812028	MM163-MC	
RANGER GREEN	812026	MM163-RG	

**MSRP: \$47.95**

**MOLLE Single Shingle 1-Mag Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814967	MS1-ABU	
ARMY ACU	812057	MS1-ACU	
A-TACS	813407	MS1-AS	1 Mag
BLACK	812054	MS1-BK	Size: Approximate
COYOTE TAN	812055	MS1-CT	3.5" x 6" x 2"
MULTICAM	812058	MS1-MC	
RANGER GREEN	812056	MS1-RG	

**MSRP: \$24.95**

**MOLLE Double Shingle 1-Mag Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814967	MSB21-ABU	
ARMY ACU	812059	MSB21-ACU	
A-TACS	813408	MSB21-AS	2 Mags
BLACK	812070	MSB21-BK	Size: Approximate
COYOTE TAN	812071	MSB21-CT	6.5" x 6" x 2"
MULTICAM	812073	MSB21-MC	
RANGER GREEN	812072	MSB21-RG	

**MSRP: \$29.95**

**MOLLE Triple Shingle 1-Mag Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814966	MSB31-ABU	
ARMY ACU	812167	MSB31-ACU	
A-TACS	813415	MSB31-AS	3 Mags
BLACK	812164	MSB31-BK	Size: Approximate
COYOTE TAN	812165	MSB31-CT	9.5" x 6" x 2"
MULTICAM	813414	MSB31-MC	
RANGER GREEN	812166	MSB31-RG	

**MSRP: \$36.95**

**MOLLE Shingle/Pistol Enhanced (1) Mag Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814963	MSPE1-ABU	
ARMY ACU	812206	MSPE1-ACU	
A-TACS	813418	MSPE1-AS	1 Mag
BLACK	812203	MSPE1-BK	Size: Approximate
COYOTE TAN	812204	MSPE1-CT	3.5" x 5.5" x 2.25"
MULTICAM	812207	MSPE1-MC	
RANGER GREEN	812205	MSPE1-RG	

**MSRP: \$25.95**

**MOLLE Shingle/Pistol Enhanced (2) Mag Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814968	MSPE2-ABU	
ARMY ACU	812211	MSPE2-ACU	
A-TACS	813420	MSPE2-AS	2 Mags
BLACK	812208	MSPE2-BK	Size: Approximate
COYOTE TAN	812209	MSPE2-CT	6.25" x 5.5" x 2.25"
MULTICAM	812212	MSPE2-MC	
RANGER GREEN	812210	MSPE2-RG	

**MSRP: \$36.95**

**MOLLE Shingle/Pistol Enhanced (3) Mag Pouch**

COLOR	ITEM #	P/N	DESCRIPTION
ABU	814957	MSPE3-ABU	
ARMY ACU	812216	MSPE3-ACU	
A-TACS	813421	MSPE3-AS	3 Mags
BLACK	812213	MSPE3-BK	Size: Approximate
COYOTE TAN	812214	MSPE3-CT	9.5" x 5.5" x 2.25"
MULTICAM	812217	MSPE3-MC	
RANGER GREEN	812215	MSPE3-RG	

**MSRP: \$46.95**




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V. 10/1/11





## PATRIOT SOLAR GROUP'S PRODUCT LINECARD

### SOLAR MOUNTS

#### GROUND MOUNT SYSTEMS

*Designed for quick assembly, ideal for large commercial and utility-scale installations*

**300 SERIES**



#### SINGLE-AXIS TRACKING MOUNT

*Tracks from east to west for maximum yield.*

**3000 SERIES**



#### DUAL-AXIS TRACKING MOUNTS

*Allows for multiple configurations dependant on field layout.*

**2.0KW 3.0KW 4.0KW**



#### SOLAR TRACKING CARPORT/SHADING STRUCTURE

*Increased power production.  
Ideal for heat islands.*

**TRACKING / FIXED STRUCTURE**





## SOLAR MOUNTS (CONTINUED)

### FIXED SOLAR POLE MOUNTS

Universal mounting rails to fit any commercially available photovoltaic panel.

2.0KW 3.0KW 4.0KW



### SOLAR NON PENETRATING (BALLASTED) MOUNTS

Non-penetrating mount ideal for brown fields or temporary locations.

275 SERIES 375 SERIES



### FLAT ROOF MOUNT SYSTEMS (SELF BALLASTING)

Designed for industrial flat roof structures. Easily expandable grid.



### SOLAR WALL CANOPY

Fixed design customizable to fit any commercially available solar panel.



## MOBILE UNITS

### "SUNPAD" HD SOLAR CHARGE TRAILERS

*Rugged high power output for demanding applications.  
Ideal for remote area locations.*

2.0KW 3.0KW 4.0KW



### "MICRO" SOLAR CHARGE TRAILERS

*Compact unit with storage, great for recreational and  
outdoor activities.*



### "MICRO" SOLAR CHARGE TRAILERS

*Large storage space with battery back-up. Ideal for  
contractors, events, disaster relief and more.*





# SOLAR LED LIGHTING



## SOLAR CART W/ LED LIGHT TOWER

*Spot lighting solution for outdoor events and is noise free!*



## SOLAR FLOODLIGHT TRAILER W/ 30FT. AUTO-UP TOWER

*Off-Grid self contained lighting system perfect for off-site road and construction lighting.*



## PORTABLE SOLAR CHARGING CASES W/ LED LIGHTING

*Excellent for powering portable electronics. Requiring medium amounts of power such as laptops, camcorders, ect...*

13W 15W 20W 40W 60W







## FLEXIBLE SOLAR PANELS

### FLEXFILM SOLAR PANELS

Lightweight and reliable portable solar charging units. Mount and secure in any position.

6.5W 12W 25W 30W 62W



### MILITARY P3 PORTABLE FOLDOUT SYSTEM

Reliable and portable solar power for critical electronic gear.

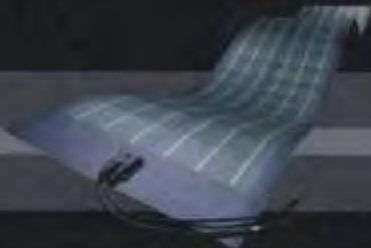
30W 62W 124W



### POWERFLEX BIPV

Lay flat, no tilt needed. Performs in all light conditions and is shade tolerant.

2 METER 6 METER

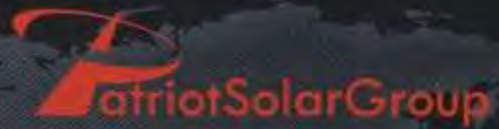


### UNI-SOLAR

Quick-connect terminals and adhesive backing. High temperature and low light performance.

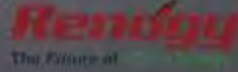
68" INCHES 136" INCHES





## SOLAR PANELS

PATRIOT SOLAR GROUP IS A PROUD PARTNER AND DISTRIBUTOR OF:



## PATRIOT PRODUCTS

### SUN SCOUT CONTROLLER

*Sun sensor and PLC based versions available.  
Superior tracking accuracy*

### TRACKING CONTROLLERS



## OFF-GRID MONITORING SYSTEMS

### OFF-GRID MONITORING SYSTEMS

*Provide remote power to monitoring and  
digital communication devices.*

### CUSTOM INTERGRATION





## PATRIOT PRODUCTS

### INVERTERS AND POWER MONITORING SOFTWARE

Microinverter system improves harvest along with monitoring analysis software.



### RV/MARINE PANELS

Deck mountable, unbreakable panels designed for marine and RV use.

6W 12W 30W 40W 55W



### CHARGE CONTROLLERS

Continuous Maximum Power Point Tracking Charge Controllers

TRACKING CONTROLLERS



## ADDITIONAL PRODUCTS

- FLEXFILM GROUND MONO-MOUNT SYSTEM
- SOLAR WATER PUMP
- EV CHARGING SYSTEMS



## Ground Mount PV System

Sold in Sections

### 250 Series

**Part SLR-GRD258:**

4 panels per section  
(60 Cell Panels (39.1" x 65"))

**Part SLR-GRD258-ADD:**

Add-on section assembly

### 300 Series

**Part SLR-GRD308:**

4 panels per section  
(72 Cell Panels (39.1" x 77"))

**Part SLR-GRD308-ADD:**

Add-on section assembly

Ground Mount



#### Features & Benefits

- Modular with quick assembly
- Starting section assembly includes 2 posts, 2 trusses, 2 rails and hardware
- Add-on section assembly includes: 1 post, 1 truss, 2 rails and hardware
- Mounting structure is 100% hot-dipped galvanized
- Ideal for large commercial and utility-scale installations
- Rugged, Weather Resistant Designs
- 10-year guarantee against mechanical failure (breakage) of the frame construction

Patriot Solar Group (PSG) manufacturing and engineering for the renewable world. We are committed to providing the highest quality products and service in the industry. Our dedicated sales, engineering, and operations staff keeps the customer and the environment at the forefront of their minds while creating a customized solution to fit your renewable needs. PSG will work hand in hand with you from the conception of the project until completion. If you are in the market for a renewable solution and want

more than "just a supplier" look to PSG for your manufacturing and engineering needs. All Patriot Solar mounts are designed to withstand over 100 mph wind-loading survival and come standard with steel modular rails. These modular rails can be assembled to almost any panel manufacturers known to the solar industry. This gives Patriot the ability to offer our customers and installers, Quality and peace-of-mind that the system will assemble together fast and efficient.

# Ground Mount PV System

## Sold in Sections



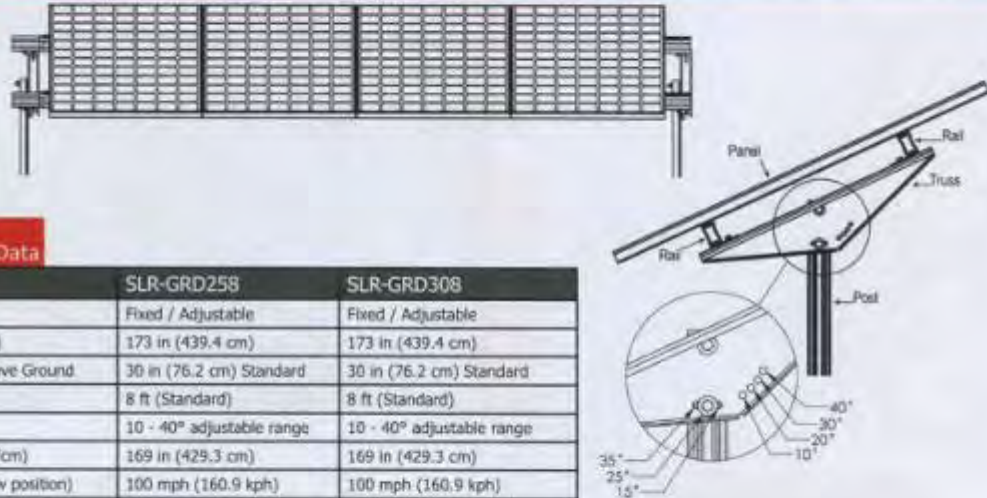
### 250 Series

Part SLR-GRD258: 4 panels per section (60 Cell Panels (39.1" x 65"))  
 Part SLR-GRD258-ADD: Add-on section assembly

### 300 Series

Part SLR-GRD308: 4 panels per section (72 Cell Panels (39.1" x 77"))  
 Part SLR-GRD308-ADD: Add-on section assembly

### 1 Section



### Mechanical Data

	SLR-GRD258	SLR-GRD308
Type	Fixed / Adjustable	Fixed / Adjustable
Rail Length (in/cm)	173 in (439.4 cm)	173 in (439.4 cm)
Height (in/cm) Above Ground	30 in (76.2 cm) Standard	30 in (76.2 cm) Standard
Post Length	8 ft (Standard)	8 ft (Standard)
Tilt Angle	10 - 40° adjustable range	10 - 40° adjustable range
Section Length (in/cm)	169 in (429.3 cm)	169 in (429.3 cm)
Wind Survival (stow position)	100 mph (160.9 kph)	100 mph (160.9 kph)
Quantity of Modules (based on 1.6m <sup>2</sup> modules)	4* Panels (39.1" x 65")	4* Panels (39.1" x 77")
Module Orientation	Portrait	Portrait
Mounting Area (does not include panel overhang)	46 ft <sup>2</sup>	59 ft <sup>2</sup>
System weight w/o panels (lbs/kilo)	200 lbs (91 kg) (140 lbs for each additional add-on section w/o panels)	213 lbs (97 kg) (147 lbs for each additional add-on section w/o panels)

All specifications subject to change without notice.

### Base + Add-On

	1 Section	5 Section	10 Section	25 Section	50 Section	100 Section
# of Base Sections	1	1	1	1	1	1
# of Add-on Sections	0	4	9	24	49	99
Length of Row (ft)	14.08'	70.40'	126.72'	337.92'	689.92'	1393.92'

• Post is steel grade 80,000 psi minimum yield strength

Base Package	Base Package	Base Package	Base Package	Base Package	Base Package
SLR-GRD258	SLR-GRD258	SLR-GRD258	SLR-GRD258	SLR-GRD258	SLR-GRD258
SLR-GRD258-ADD	SLR-GRD258-ADD	SLR-GRD258-ADD	SLR-GRD258-ADD	SLR-GRD258-ADD	SLR-GRD258-ADD
SLR-GRD308	SLR-GRD308	SLR-GRD308	SLR-GRD308	SLR-GRD308	SLR-GRD308
SLR-GRD308-ADD	SLR-GRD308-ADD	SLR-GRD308-ADD	SLR-GRD308-ADD	SLR-GRD308-ADD	SLR-GRD308-ADD

Base Package
SLR-GRD258
SLR-GRD258-ADD
SLR-GRD308
SLR-GRD308-ADD
SLR-GRD258
SLR-GRD258-ADD
SLR-GRD308
SLR-GRD308-ADD

### Warranty

#### Ten (10) years against mechanical failure of the frame construction

Patriot Solar Group's Solar Mounts are warranted to be free from defects in material and workmanship under normal use and service. Patriot Solar Group shall repair or replace defective equipment, at no charge, or at its option, refund the purchase price, if the equipment is returned to Patriot Solar Group not more than ten (10) years after shipment. Removal or re-installation of equipment and its transportation shall not be at cost of Patriot Solar Group except Patriot Solar Group shall return repaired or replaced equipment freight prepaid. Complete warranty available on our Web site: [www.patriotsolargroup.com](http://www.patriotsolargroup.com)

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# Single-Axis Horizontal PV Tracker

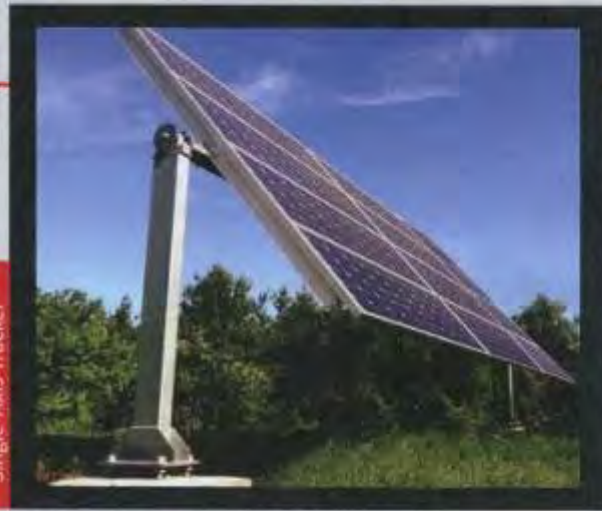
Single-Axis Modular

## 3000 Series

**Part SLR-HZT3000-MOT:**  
Single-axis Horizontal PV Tracker  
(200-300 Watt Panels)

**Part SLR-HZT3000-ADD:**  
Add-on Section  
(Limit 3 Add-on's per System)  
Mounts 12-48 Panels Based on Size of Panels

Single-Axis Tracker



Up to 14.4 kW per controller/actuator drive

### Features & Benefits

- Built more durable than similar units using thick wall steel mount
- Ideal for remote area installation
- Minimal maintenance required
- Low cost foundations
- Standard universal mounting rails to fit any commercially available photovoltaics panel
- Can increase productivity of solar modules up to 35%
- Modular to allow for multiple configurations dependant on field layout
- (1) Control system runs up to (4) 20 foot sections
- Each system is prefab designed for quick installation, ez-bolt together design requires no onsite **alignment** or **welding**

\*Based on 994mm x 1640mm x 46mm

Base System



Base + 1 Add-On



Base + 2 Add-On's



Base + 3 Add-On's





# Single-Axis Horizontal PV Tracker

## Single-Axis Modular



### 3000 Series

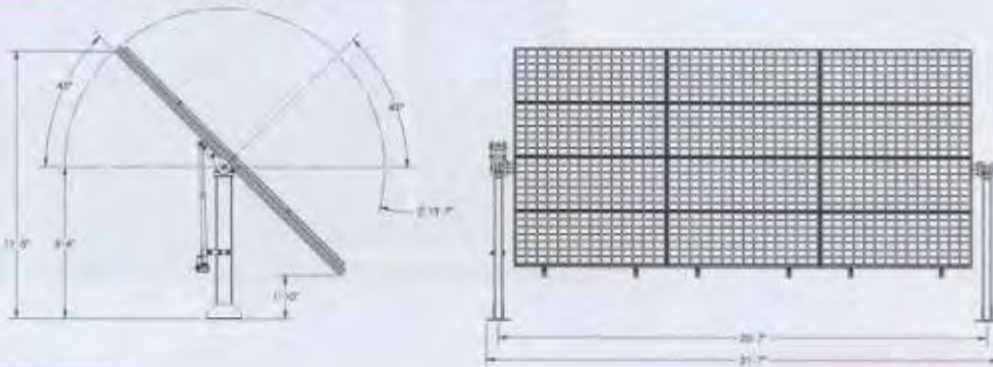
Part SLR-HZT3000-MOT: Single-Axis Horizontal PV Tracker (200-300 Watt Panels)

Part SLR-HZT3000-ADD: Add-on Section (Limit 3 Add-on's per Base)

Mounts 12-48 Panels Based on Size of Panels

### 1 Section

Maximum Add-On's are 3 per a system, Total 4 sections per drive/controllers.



### Mechanical Data

		SLR-HZT300-MOT			
Type	Motorized Horizontal				
Module Orientation	Landscape				
Degrees of Elevation Travel	+/- 45 Degrees				
Wind Survival (stow position)	120 mph (193) km/h				
Height (in/cm)	78 in (655 cm)				
Rail Length (in/cm)	162 in (663 cm)				
Beam Section	4 in x 4 in x 5/16 in wall 20 ft long				
with Add-On's	Base	1 Add-On	2 Add-On's	3 Add-On's	
Width (in/cm)	282 in (716 cm)	564 in (1,432 cm)	846 in (2,149 cm)	1,128 in (2,865 cm)	
Quantity of Modules (based on 1.5m <sup>2</sup> modules)	12 <small>(204 mm x 1840 mm x 46 mm)</small>	24 <small>(204 mm x 2040 mm x 46 mm)</small>	36 <small>(194 mm x 2040 mm x 46 mm)</small>	48 <small>(204 mm x 1840 mm x 46 mm)</small>	
Mounting Area (does not include panel overhang)	268 ft <sup>2</sup> (25m <sup>2</sup> )	536 ft <sup>2</sup> (49m <sup>2</sup> )	804 ft <sup>2</sup> (74m <sup>2</sup> )	1,072 ft <sup>2</sup> (99m <sup>2</sup> )	
System weight (lbs/kilo)	1,151 lbs (522 kg)	2,060 lbs (934 kg)	2,969 lbs (1,347 kg)	3,878 lbs (1,759 kg)	

All specifications subject to change without notice.

### Warranty

- Ten (10) years against mechanical failure of the frame construction
- Two (2) years on Electronics and Workmanship

Patriot Solar Group's Solar Mounts are warranted to be free from defects in material and workmanship under normal use and service. Patriot Solar Group shall repair or replace defective equipment, at no charge, or at its option, refund the purchase price, if the equipment is returned to Patriot Solar Group not more than ten (10) years after shipment. Removal or re-installation of equipment and its transportation shall not be at cost of Patriot Solar Group except Patriot Solar Group shall return repaired or replaced equipment freight prepaid. Complete warranty available on our Web site: [www.patriotsolargroup.com](http://www.patriotsolargroup.com)

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## Dual-Axis Tracking Mounts

Pole Mount

### 2.0kW

Part SLR-DA2000-6:  
8 panels per system

### 3.0kW

Part SLR-DA3000-6:  
12 panels per system

### 4.0kW

Part SLR-DA4000-8:  
16 panels per system

Dual-Axis Tracker



Pictured: 4.0kW Dual-Axis

### Features & Benefits

- Built more durable than similar units using thick wall steel mount
- Ideal for remote area installation
- Minimal maintenance required
- Low cost foundations
- Standard universal mounting rails to fit any commercially available photovoltaic panel
- Modular to allow for multiple configurations dependant on field layout



# Dual-Axis Tracking Mounts



## Pole Mount

2.0kW

Part SLR-DA2000-6: 8 panels per system

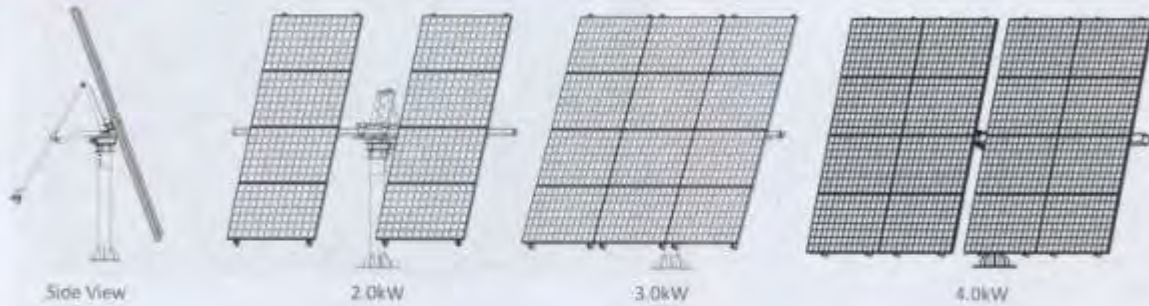
3.0kW

Part SLR-DA3000-6: 12 panels per system

4.0kW

Part SLR-DA4000-8: 16 panels per system

### Mounts



### Mechanical Data

	SLR-DA2000-6	SLR-DA3000-6	SLR-DA4000-8
Type	Dual-Axis Pole Top		
Main Beam (in/cm)	244" in (620 cm)	244" in (620 cm)	244" in (620 cm)
Rail Length (in/cm)	162" in (411.5 cm)	162" in (411.5 cm)	162" in (411.5 cm)
Degree of Elevation Travel	15 to 65°	15 to 65°	15 to 65°
Wind Survival (stow position)	>100 mph (161 km/h)	>100 mph (161 km/h)	>100 mph (161 km/h)
Quantity of Modules (Based on 39"x65" (1x1.6 m) module)	8	12	16
Beam section (inches)	4x4	4x4	6x6
Module Orientation	Landscape	Landscape	Landscape
Mounting Area (does not include panel overhang)	44 ft <sup>2</sup> (13.5 m <sup>2</sup> )	62.3 ft <sup>2</sup> (19 m <sup>2</sup> )	76 ft <sup>2</sup> (25.6 m <sup>2</sup> )
Shipping weight (lbs/kilo)	700 lbs (317.5 kg)	950 lbs (431 kg)	1100 lbs (499 kg)

All specifications subject to change without notice.

### Warranty

- Ten (10) years against mechanical failure of the frame construction
- Two (2) years on Electronics and Workmanship

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## Fixed Solar Pole Mounts

Pole Mount

### 2.0kW

Part SLR-PL2000-6:  
8 panels per system

### 3.0kW

Part SLR-PL3000-6:  
12 panels per system

### 4.0kW

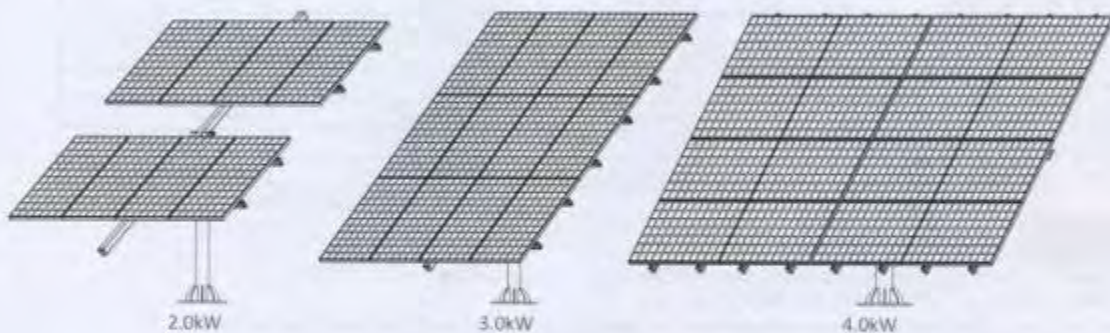
Part SLR-PL4000-8:  
16 panels per system



Pictured: 4.0kW Fixed Pole Mount

#### Features & Benefits

- Built more durable than similar units using thick wall steel mount
- Ideal for remote area installation
- Minimal maintenance required
- Low cost foundations
- Standard universal mounting rails to fit any commercially available photovoltaic panel
- Modular to allow for multiple configurations dependant on field layout



# Fixed Solar Pole Mounts

## Pole Mount

2.0kW

Part SLR-PL2000-6: 8 panels per system

3.0kW

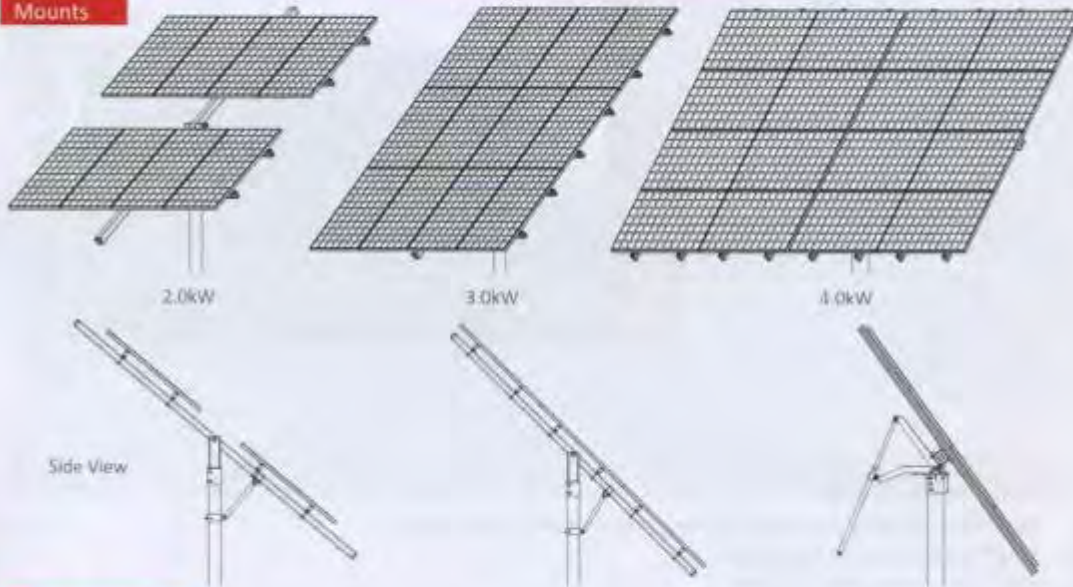
Part SLR-PL3000-6: 12 panels per system

4.0kW

Part SLR-PL4000-8: 16 panels per system



### Mounts



### Mechanical Data

	SLR-PL2000-6	SLR-PL3000-6	SLR-PL4000-8
Type	Fixed Pole Top		
Main Beam (in/cm)	180" in (460 cm)	180" in (460 cm)	244" in (620 cm)
Rail Length (in/cm)	162" in (411.5 cm)	162" in (411.5 cm)	162" in (411.5 cm)
Degree of Elevation Travel	15 to 60°	15 to 60°	15 to 60°
Wind Survival (stow position)	>100 mph (161 km/h)	>100 mph (161 km/h)	>100 mph (161 km/h)
Quantity of Modules (Based on 39"x65" (1x1.6 m) module)	8	12	16
Beam section (inches)	4x4	4x4	6x6
Module Orientation	Landscape	Landscape	Landscape
Mounting Area (does not include panel overhang)	44 ft <sup>2</sup> (13.5 m <sup>2</sup> )	62.3 ft <sup>2</sup> (19 m <sup>2</sup> )	276 ft <sup>2</sup> (25.6 m <sup>2</sup> )
Shipping weight (lbs/kilo)	600 lbs (317.5 kg)	675 lbs (431 kg)	925 lbs (499 kg)

All specifications subject to change without notice.

### Warranty

- Ten (10) years against mechanical failure of the frame construction
- Two (2) years on Electronics and Workmanship

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## Non Penetrating (Ballasted) Solar Mount Sold in Sections

### 275 Series

**Part SLR-GRD275:**

4 panels per section  
(60 Cell Panels (39.1" x 65"))

**Part SLR-GRD275-ADD:**

Add-on section assembly

### 375 Series

**Part SLR-GRD375:**

4 panels per section  
(72 Cell Panels (39.1" x 77"))

**Part SLR-GRD375-ADD:**

Add-on section assembly



#### Features & Benefits

- Modular with quick assembly
- Starting section assembly includes 2 pre-cast ballasted posts, 2 trusses, 2 rails and hardware
- Add-on section assembly includes: 1 pre-cast ballasted post, 1 truss, 2 rails and hardware
- Mounting structure is 100% hot-dipped galvanized
- Ideal for large commercial and utility-scale installations
- Rugged, Weather Resistant Designs
- 10-year guarantee against mechanical failure (breakage) of the frame construction
- No Ground Penetration

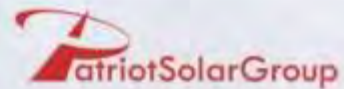
Patriot Solar Group (PSG) manufacturing and engineering for the renewable world. We are committed to providing the highest quality products and service in the industry. Our dedicated sales, engineering, and operations staff keeps the customer and the environment at the forefront of their minds while creating a customized solution to fit your renewable needs. PSG will work hand in hand with you from the conception of the project until completion. If you are in the market for a renewable solution and want

more than "just a supplier" look to PSG for your manufacturing and engineering needs. All Patriot Solar mounts are designed to withstand over 100 mph wind-loading survival and come standard with steel modular rails. These modular rails can be assembled to almost any panel manufacturers known to the solar industry. This gives Patriot the ability to offer our customers and installers, Quality and peace-of-mind that the system will assemble together fast and efficient.



# Non Penetrating (Ballasted) Solar Mount

## Sold in Sections



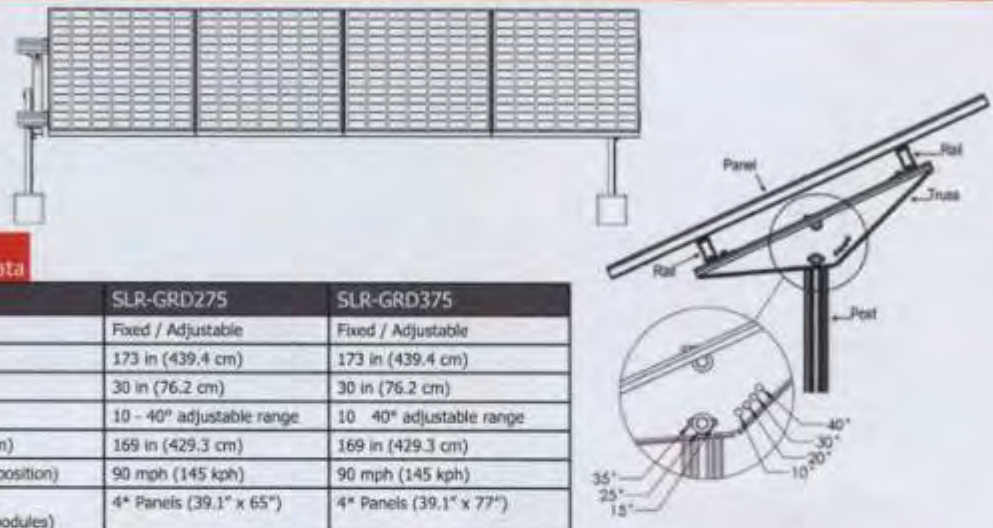
### 275 Series

Part SLR-GRD275: 4 panels per section (60 Cell Panels (39.1" x 65"))  
 Part SLR-GRD275-NPADD: Add-on section assembly

### 375 Series

Part SLR-GRD375: 4 panels per section (72 Cell Panels (39.1" x 77"))  
 Part SLR-GRD375-NPADD: Add-on section assembly

### 1 Section



### Mechanical Data

	SLR-GRD275	SLR-GRD375
Type	Fixed / Adjustable	Fixed / Adjustable
Rail Length (in/cm)	173 in (439.4 cm)	173 in (439.4 cm)
Height (in/cm)	30 in (76.2 cm)	30 in (76.2 cm)
Tilt Angle	10 - 40° adjustable range	10 - 40° adjustable range
Section Length (in/cm)	169 in (429.3 cm)	169 in (429.3 cm)
Wind Survival (stow position)	90 mph (145 kph)	90 mph (145 kph)
Quantity of Modules (based on 1.6m <sup>2</sup> modules)	4* Panels (39.1" x 65")	4* Panels (39.1" x 77")
Module Orientation	Portrait	Portrait
Mounting Area (does not include panel overhang)	46 ft <sup>2</sup>	59 ft <sup>2</sup>
System weight w/o panels (lbs/kilo) with ballast	686.5 lbs (311.4 kg) (140 lbs for each additional add-on section w/o panels)	699.5 lbs (317.1 kg) (147 lbs for each additional add-on section w/o panels)

All specifications subject to change without notice.

### Base + Add-On

	1 Section	5 Section	10 Section	25 Section	50 Section	100 Section
# of Base Sections	1	1	1	1	1	1
# of Add-on Sections	0	4	9	24	49	99
Length of Row (ft)	14.08'	70.40'	126.72'	337.92'	689.92'	1393.92'

\* Post is steel grade 80,000 psi minimum yield strength

Base Package: SLR-GRD275 or SLR-GRD375	Base Package: SLR-GRD275 or SLR-GRD375	Base Package: SLR-GRD275 or SLR-GRD375	Base Package: SLR-GRD275 or SLR-GRD375	Base Package: SLR-GRD275 or SLR-GRD375	Base Package: SLR-GRD275 or SLR-GRD375	Base Package: SLR-GRD275 or SLR-GRD375
+ (A) Add-Ons	+ (B) Add-Ons	+ (C) Add-Ons	+ (D) Add-Ons	+ (E) Add-Ons	+ (F) Add-Ons	+ (G) Add-Ons
SLR-GRD275-NPADD	SLR-GRD275-NPADD	SLR-GRD275-NPADD	SLR-GRD275-NPADD	SLR-GRD275-NPADD	SLR-GRD275-NPADD	SLR-GRD275-NPADD
SLR-GRD375-NPADD	SLR-GRD375-NPADD	SLR-GRD375-NPADD	SLR-GRD375-NPADD	SLR-GRD375-NPADD	SLR-GRD375-NPADD	SLR-GRD375-NPADD

- Base Package: SLR-GRD275 or SLR-GRD375
- 4" Posts - 3 per
- Truss - 2 per
- Rail - 2 per
- Complete Hardware
- Add-On: SLR-GRD275-NPADD or SLR-GRD375-NPADD
- 4" Posts - 2 per
- Truss - 1 per
- Rails - 2 per
- Complete Hardware

### Warranty

#### Ten (10) years against mechanical failure of the frame construction

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# Solar High Wind Fixed Horizontal Mount

Single-Axis Modular

## 2500 Series

### Part SLR-HZT2500-FXD:

Single-axis Horizontal PV Tracker  
(200-300 Watt Panels)

### Part SLR-HZT2500-ADD:

Add-on Section  
(Limit 3 Add-on's per System)  
Mounts 12-48 Panels Based on Size of Panels

Single-Axis Tracker



### Features & Benefits

- Built more durable than similar units using thick wall steel mount
- Ideal for remote area installation
- Minimal maintenance required
- Low cost foundations
- Standard universal mounting rails to fit any commercially available photovoltaics panel
- Can increase productivity of solar modules up to 35%
- Modular to allow for multiple configurations dependant on field layout
- (1) Control system runs up to (4) 20 foot sections
- Each system is prefab designed for quick installation, ez-bolt together design requires no onsite **alignment** or **welding**

\*Based on 994mm x 1640mm x 46mm

Base System



Base + 1 Add-On



Base + 2 Add-On's



Base + 3 Add-On's





# Solar High Wind Fixed Horizontal Mount Single-Axis Modular



## 2500 Series

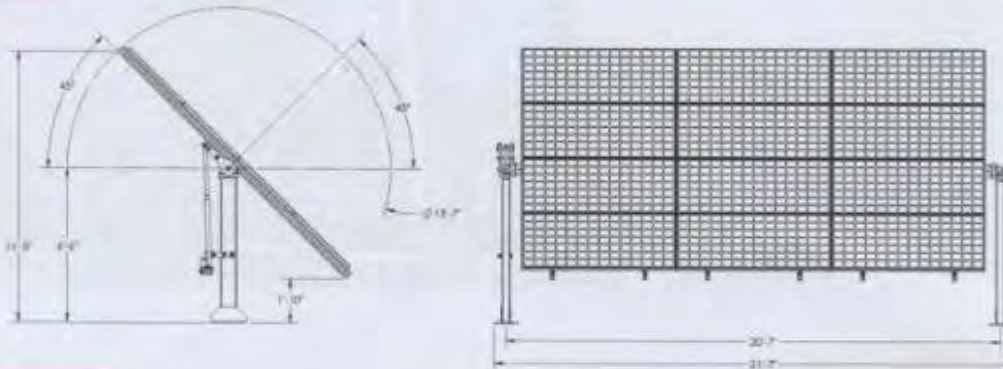
Part SLR-HZT2500-FXD: Solar High Wind Fixed Horizontal Mount (200-300 Watt Panels)

Part SLR-HZT2500-ADD: Add-on Section (Limit 3 Add-on's per System)

Mounts 12-48 Panels Based on Size of Panels

### 1 Section

Maximum Add-On's are 3 per a system.



### Mechanical Data

Series		SLR-HZT300-MOT			
Type	Fixed Horizontal				
Module Orientation	Landscape				
Degrees of Elevation Travel	+/- 45 Degrees				
Wind Survival (show posture)	120 mph (193) km/h				
Height (in/cm)	78 in (655 cm)				
Rail Length (in/cm)	162 in (663 cm)				
Beam Section	4 in x 4 in x 5/16 in wall 20 ft long				
with Add-On's	Base	1 Add-On	2 Add-On's	3 Add-On's	
Width (in/cm)	262 in (716 cm)	564 in (1,432 cm)	846 in (2,149 cm)	1,128 in (2,866 cm)	
Quantity of Modules (based on 1.6m <sup>2</sup> modules)	12 <small>(204 mm x 2040 mm x 46 mm)</small>	24 <small>(204 mm x 2040 mm x 46 mm)</small>	36 <small>(204 mm x 2040 mm x 46 mm)</small>	48 <small>(204 mm x 2040 mm x 46 mm)</small>	
Mounting Area (does not include panel overhang)	268 ft <sup>2</sup> (25m <sup>2</sup> )	536 ft <sup>2</sup> (49m <sup>2</sup> )	804 ft <sup>2</sup> (74m <sup>2</sup> )	1,072 ft <sup>2</sup> (99m <sup>2</sup> )	
System weight (lbs/kilo)	1,151 lbs (522 kg)	2,060 lbs (934 kg)	2,969 lbs (1,347 kg)	3,878 lbs (1,759 kg)	

All specifications subject to change without notice

### Warranty

- Ten (10) years against mechanical failure of the frame construction

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## Solar Tracking Carport/ Shading Structure

Single-Axis Modular

Single-Axis Carport



### Features & Benefits

- Built more durable than similar units using thick wall steel mount
- Ideal for parking areas
- Minimal maintenance required
- Low cost foundations
- Standard universal mounting rails to fit any commercially available photovoltaics panel
- Can increase productivity of solar modules up to 30%
- Modular to allow for multiple configurations dependant on field layout
- Each system is prefab designed for quick installation, ez-bolt together design requires no onsite **alignment** or **welding**

EQUIPPED WITH  
SunScout  
Controllers

# Solar Tracking Carport/ Shading Structure

## Single-Axis Modular



### Tracking Carport/ Shade Structure

Part SLR-CPT450-MOT: Single-axis Horizontal PV Tracker (200-300 Watt Panels)

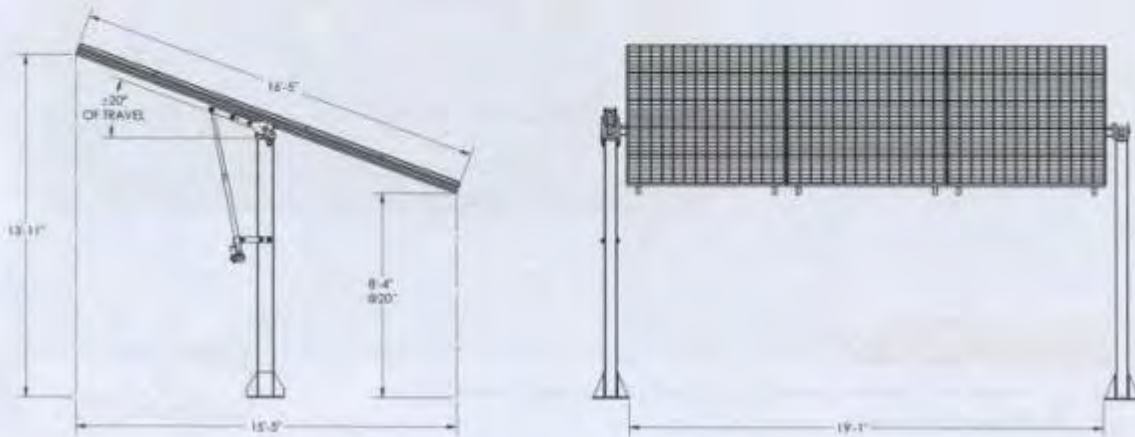
Part SLR-CPT450-ADD: Add-on Section (Limit 3 Add-on's per System)

### Fixed Carport/ Shade Structure

Part SLR-CPT350-FXD: Single-axis Horizontal PV Tracker (200-300 Watt Panels)

Part SLR-CPT350-ADD: Add-on Section (Limit 3 Add-on's per System)

## 1 Section



## Mechanical Data

	SLR-CPT450-MOT	SLR-CPT350-FXD
Type	Motorized Horizontal	Fixed Horizontal
Module Orientation	Landscape	
Degrees of Elevation Travel	+/- 20 Degrees	
Wind Survival (stow position)	90 mph (145) km/h	
Height at parallel (in/cm)	126 in (304.8 cm)	
Rail Length (in/cm)	192 in (663 cm)	
Beam Section	4 in x 4 in x 5/16 in wall 20 ft long	

All specifications subject to change without notice

## Warranty

- Ten (10) years against mechanical failure of the frame construction.
- Two (2) years on Electronics and Workmanship

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## Off the Grid Monitoring System



### Features & Benefits

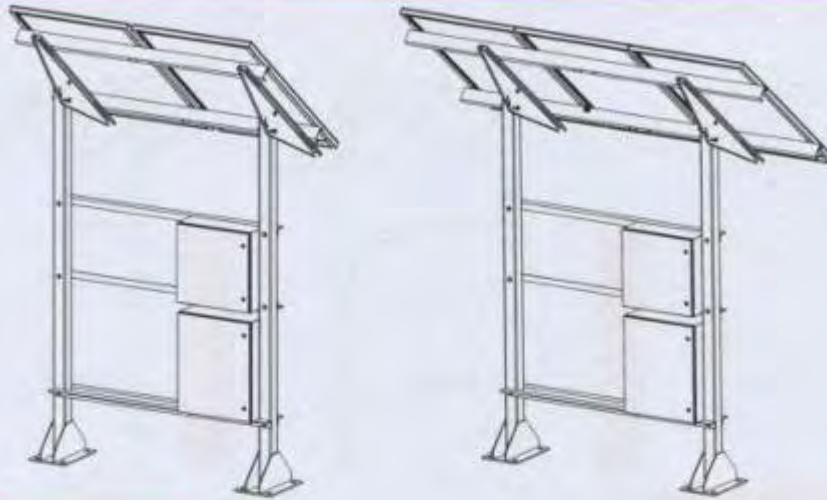
- Modular with quick assembly
- Section assembly includes: 2 posts, 2 trusses, 2 rails and hardware
- Mounting structure is 100% hot-dipped galvanized
- Rugged, Weather Resistant Designs
- 10-year guarantee against mechanical failure (breakage) of the frame construction

Patriot Solar Group (PSG) manufacturing and engineering for the renewable world. We are committed to providing the highest quality products and service in the industry. Our dedicated sales, engineering, and operations staff keeps the customer and the environment at the forefront of their minds while creating a customized solution to fit your renewable needs. PSG will work hand in hand with you from the conception of the project until completion. If you are in the market for a renewable solution and want

more than "just a supplier" look to PSG for your manufacturing and engineering needs. All Patriot Solar mounts are designed to withstand over 100 mph wind-loading survival and come standard with steel modular rails. These modular rails can be assembled to almost any panel manufacturers known to the solar industry. This gives Patriot the ability to offer our customers and installers, Quality and peace-of-mind that the system will assemble together fast and efficient.



# Off the Grid Monitoring System



## Mechanical Data

	2 Panel System	3 Panel System
Type	Fixed / Adjustable	
Rail Length (in/cm)	82"	122"
Height (in/cm)	9.5 ft	
Tilt Angle	10 - 40° adjustable range	
Section Length (in/cm)	Variable	
Post to Post	6 ft	
Wind Survival	100 mph (160.9 kph)	
Quantity of Modules (based on 1.6m <sup>2</sup> modules)	Up to 3* Panels (39.1" x 65")	
Module Orientation	Portrait	

All specifications subject to change without notice.

## Warranty

- Ten (10) years against mechanical failure of the frame construction
- Two (2) years on Electronics and Workmanship

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## SunScout Controller

PLC AND SUN SENSOR  
BASED CONTROLLER

Part Number:

SLR-GRDCONAG100-SA:

Single-Axis Lightseeker Controller

SLR-CONABLY200-SA:

Single-Axis Algorithm Controller

SLR-GRDCONAG300-DA:

Dual-Axis Lightseeker Controller

SLR-CONABLY400-DA:

Dual-Axis Algorithm Controller

SunScout Controller



SunScout  
Controllers



### Features & Benefits

PSG SPA Solar Tracking Controller

- Single or Dual-Axis Control Programming Tracking
- 100-120VAC @ 5amps operating voltage
- Power Consumption 600Watts,
- Embedded 64 bit NREL Solar Position Algorithm +/- 0.0003°  
(Positioning accuracy will depend on mechanics)
- Analog Inputs (TC, 4-20MA, 0-10V)
- Ethernet, RS232/RS-485 communications
- LCD display, for setting parameters
- Discrete Input Limit Switches
- EL/AZ Encoder Inputs: Reed/Hall Effect
- Built-in Real Time Clock
- NEMA 4X Enclosure
- -20 to 60C° (-4 to 140°F)
- Auto Stow Wind Sensor (Optional)
- Manual Push Button Control Pendant (Optional)
- Lightning Arrestor (Optional)

# SunScout Controllers



PLC AND SUN SENSOR BASED CONTROLLER



Part Number	Description
SLR-GRDCONAG100-SA Single-axis Light Seeker Controller	Designed for DC motor systems, 200w power supply
SLR-CONABLY200-SA Single-axis Algorithm Controller.	Analog Inputs, Ethernet RS232 Communications, 200w power supply
SLR-GRDCONAG300-DA Dual-axis Light Seeker Controller	Designed for DC motor systems, 200w power supply
SLR-CONABLY400-DA Dual-axis Algorithm Controller	Dual-axis Algorithm Controller, Astro-logical PLC System w/upgrade to any requirement, Ethernet RS232 Communications, 200w power supply

## Warranty

Two (2) years Electronics and Workmanship

All specifications subject to change without notice.

Patriot Solar Group is dedicated to providing the highest quality units using only the best materials for solar and lighting products for home and commercial use that support renewable energy. Our products are environmentally safe, efficient, and affordable while offering the peace of mind of high durability able to withstand the ravages of wind, ice, and water. Our manufacturing processes are based on automotive quality standards to ensure high quality and reliability the first time.

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## Portable LED Lighting Kits

Lighting and Charging Units

LED Lighting Kits



### Features & Benefits

- Input : Solar panel or AC/DC adapter charging, CLA car power charging
- Output : DC 12V; USB5.5V
- Functions of electric quality indication, low battery warning and alarm sound
- The protection functions: over discharge, over charge, overload, low voltage, short circuit protection
- Inverter
- LED light
- Weight and size: 8.4kg, 457\*370\*184mm

### Accessories

- Unbreakable ABS resin case with features of compact resistance, waterproof, moisture resistance, anti-static and corrosion resistance
- 12W high brightness LED lighting head with long use life which is equivalent to 48W incandescent
- Adjustable light pole and 360 degree rotating lamp head
- Lead Acid or Co-based polymer battery, eco-friendly and explosion-proof
- Intelligent controller with protection of over charges and discharge
- Visual display or DC battery voltage meter

# Portable LED Lighting Kits

## Lighting and Charging Units



### Specification Data

Model	SF-HP012-15/1	SF-HP012-20-1/2		SF-HP012-40-2/4	
Solar Panel (W)	15	20		40	
LED Light Power and Quantity	12W x 1	12W x 1	12W x 2	12W x 2	12W x 4
Battery Capacity (Ah)	17	20		40	
Charging Time (h)	Solar	12	10	10	
	AC-DC	8	8	8	
Illumination Brightness	1170~1370	1170~1370		1170~1370	
Lighting Duration (h)	13.6	16	8	16	8
Size (mm)	457*370*184	600*440*230		600*440*230	
Net Weight (Kg)	8.4	18	20	18	20

All specifications subject to change without notice.

### Warranty

- Ten (10) years against mechanical failure of the frame construction

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## Solar Floodlight Trailer w/ 30ft. Auto-Up Tower

LED Lighting Mobile Unit

### Floodlight Cart

Part SLR-LGTCT180-4L

### Floodlight Trailer - 4 Lights

Part SLR-LGTCT180B-4L

### Floodlight Trailer - 8 Lights

Part SLR-LGT360B-8L

Fixed Pole Mount



### Features & Benefits

- Clean power without carbon emissions
- Mast height can be manual or pneumatic - from 15ft to 30ft high
- Heavy duty LED lighting cart or trailer available
- From 180W to 360W of solar capacity
- Portable, convenient and environmentally friendly design
- Continuous for 13-18 hours operation
- Excellent for outdoor operations and activities
- Low noise





## Solar Floodlight Trailer w/ 30ft. Auto-Up Tower

LED Lighting Mobile Unit

**Floodlight Cart**

Part SLR-LGTCT180-4L

**Floodlight Trailer - 4 Lights**

Part SLR-LGTCT180B-4L

**Floodlight Trailer - 8 Lights**

Part SLR-LGT360B-8L



### Mechanical Data

	SLR-LGTCT180-4L	SLR-LGT180B-4L	SLR-LGT180B-8L
Solar Lights	4 Lights (20W Bulbs)	4 Lights (20W Bulbs)	6 Lights (20W Bulbs)
Solar Panels	(2) 90W Panels	(2) 90W Panels	(2) 90W Panels
Battery (80AH)	2 Sets	2 Sets	4 Sets
Mast Height	4.5 - 9M	4.5 - 9M	4.5 - 9M
Operation Time	13 Hours	13 Hours	18 Hours
Weight	385 lbs	1047 lbs	1267 lbs

All specifications subject to change without notice.

### Warranty

- Ten (10) years against mechanical failure of the frame construction

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## 3000 Series Solar Mobile Trailer

Portable Solar Power Unit  
Part SLR-TRL5003-8AH

Solar Mobile Trailer



### Uses & Benefits

- Recreational Activities
- Disaster Relief
- Medical Care Stations
- Landscaping
- Refrigeration
- Construction
- Remote Communication
- Sporting Events
- Outdoor Lighting
- Electrical Event Signs
- Social Events
- Outdoor Ceremonies
- and much more.....



Patriot's line of trailer based solar power units combine the utility of a mobile trailer with the benefits of solar power. Rugged and durable, these solar generators with battery back-up, are perfect for use in a variety of recreational and outdoor activities during the day or night. The lightweight unit can be pulled by virtually any vehicle with a hitch. Power generated is green, quiet and odor-free.

# 3000 Series Solar Mobile Trailer

Portable Solar Power Unit



## Mechanical Data

**Body:** Injection Molding Polyethylene  
**Dimensions:** Box 87"L x 50"T x 44"W  
Volume: 81.8 cu ft.  
Door Dimensions: 35"W x 45"T  
Overall Dimensions: 116"L x 37"T x 62"W

**Maximum Power Input:** 720W  
**Maximum Power Voltage:** 120VAC  
**Maximum System Voltage:** 12VDC  
**Batteries:** 980AH - 1200AH  
**Maximum Power Output:** 5000W

**Frame:** 3" x 2" Angle Iron  
All Welded Construction  
Herculiner Coated 1/2" Plywood Floor  
Black Powdered Coated Finish  
3,200 lbs. Spring axle  
(allows for 2,500 lbs. carrying capacity)  
2" Class II Coupling  
13" Wheels and Tires

### Color Options





## SunPad Mobile Solar Trailer

Portable Mobile Unit



SunPad

### Features & Benefits

- Solar/ Battery Powered
- Requires no fossil fuels or refueling
- Clean - no exhaust, emissions or oil changes
- Quiet, odor-free operation
- Durable and rugged
- Portable
- Easy to setup and easy to use



Patriot's line of mobile solar products combine the benefits of a solar generator with the utility of a mobile trailer. The SunPad is designed for use at outdoor remote locations for energy farming, remote power needs, and in any activity that requires off-grid power and utility. Power generated is convenient, reliable quiet and produces zero emissions.

# SunPad

## Solar Mobile Trailer

Portable Mobile Unit



### General Specifications

**Model Number:** GWSP  
**Maximum Power Input:** 1500 Watts  
**Maximum System Voltage:** 48VDC  
**Batteries:** 1960 AH  
**Maximum Power Voltage:** 120v/240vac

### Features

Solar/ Battery Powered  
Requires no fossil fuels or refueling  
Clean - no exhaust, emissions or oil changes  
Quiet, odor-free operation  
Durable and rugged  
Portable  
Easy to setup and easy to use

### Unit Specifications

**General:**  
Maximum Vehicle Weight: 4200 lbs  
Hull: Unitized body construction using aircraft grade aluminum and chromoly steel

**Dimensions:**  
Closed: 132"L x 86"W x 104"T  
Open: 132"L x 125"W x 159"T  
Ground Clearance: 16"

**Solar Tracking:**  
Single Axis Solar Tracker  
Allow the panels to track the sun's path across the sky in elevation

Can increase the yield of solar energy installations by as much as 30% or more compared to fixed systems

### Unit Specifications

**Suspension Type:** Fully independent progressive rate trailing arm suspension

**Axle:** Tubular Steel

**Spring:** Media Progressive rate tors elastic rubber chords

**Shock Absorbers:** Telescopic, direct acting, one per wheel, HMMWV compatible

**Wheels:** 16.5 x 8.25, two piece steel, HMMWV compatible, 8 on 6.5 inch bolt pattern

**Tires:** 37 x 12.5 or 16.5 Goodyear Wrangler M/T, with 30-mile runflat inserts, HMMWV compatible

**Brakes:** 12 inch x 2 inch free backing hydraulic surge brakes with automatic breakaway actuation. Independent lever-operated left and right side mechanical parking brakes

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# Training Tools



STAR4Defense uses two training tools, developed by the Iowa Waste Reduction Center, in the training course.

## LaserPaint®

The LaserPaint® training aid is used in STAR4Defense training to teach the basic techniques of distance, control, and producing a 50% consistent overlap. It is simply attached to the spray gun and then technicians use it as a guide while spraying.



STAR4Defense is part of the Iowa Waste Reduction Center at the University of Northern Iowa. The program is managed by the United States Marine Corps Corrosion Prevention and Control Program for all services in the Department of Defense.



## VirtualPaint®

The VirtualPaint® uses computer simulation paired with virtual reality to provide a training system that effectively trains spray technicians. VirtualPaint training requires no coating, no PPE, and results in no hazardous waste generation or air emissions.

### Skill Development

VirtualPaint® assists in building essential techniques needed for proper spray application. Technicians control spray gun settings and VirtualPaint tracks transfer efficiency, mil thickness and coating used in realtime.

Accumulation mode shows variations of coatings thickness. Practice with VirtualPaint allows technicians to analyze their spray techniques immediately with no hazardous waste emissions or PPE.

### Lesson Plans

In Training Mode, technicians must be able to pass each lesson before continuing on to the next. Managers can easily set up lesson plans with required parameters for technicians to pass. Managers choose the part, thickness requirements, time allowed, overall score, and even camouflage patterns.

This ensures technicians are continually improving their techniques on different parts and meeting requirements.

### Certification

Painters pass a written test, apply coatings to a standard, and pass a virtual test; providing reproducible and documentable training records and results.



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# Training & Certification



**STAR4Defense provides hands-on training and certification for the U.S. Armed Forces.**

STAR4Defense has trained military spray technicians from military paint facilities all across the United States and overseas locations.

## STAR4Defense Mission

To provide painter training to military personnel to facilitate effective spraying of specific components, equipment, vehicles and surfaces in efforts to maximize coating efficiency and minimize environmental pollution.

## Certification

### STAR4Defense Aerospace Spray Painters Course

This course was developed with the assistance of Corpus Christi Army Depot (Corpus Christi, TX) targeted to the aerospace industry and meets requirements for ISO AS9001 and AS9110.

### STAR4Defense Coatings Technician Course

Coatings Technician focuses on comprehensive knowledge of the entire coating process and improving spray techniques.



## 3-Day Course

Classroom, in-booth, hands-on spray application and equipment training, and virtual reality training.

### AGENDA

#### DAY 1

##### CLASSROOM

- Coatings
- Equipment selection
- Gun setup
- Spray technique
- Mixing waterborne CARC

##### HANDS-ON PRACTICE

- Transfer efficiency pre-test
- Hands-On Coating Application

#### DAY 2

##### CLASSROOM

- LaserPaint® demonstration
- Equipment cleaning

##### VIRTUAL REALITY

- VirtualPaint® practice

##### HANDS-ON PRACTICE

- Mil thickness readings
- Gun setup
- Spray technique

#### DAY 3

##### CLASSROOM

- Written post-test

##### HANDS-ON PRACTICE

- Transfer efficiency post-test
- Mil thickness readings
- Hands-On Coating Application

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# Satellite Site



STAR4D satellite sites are an extension of the STAR4D certification and training program. Becoming a satellite site allows paint facilities to conduct their own STAR4D certification and training program on-site. Sites are equipped with STAR4D training equipment such as a virtual reality spray simulator known as the VirtualPaint, educational materials, and selected employees are trained to become instructors.

## Benefits of STAR4D Satellite Sites

- Improve overall quality and reduce rework
- Can help facilities improve pollution prevention and environmental reduction efforts
- Creates a certified workforce
- Ability to certify painters without travel on your own schedule

## Existing STAR4D Satellite Site Results

### Inter-American Air Forces Academy, Lackland Air Force Base, TX

During training, documented 50% reduction of paint consumed, 75% decrease in hazardous waste generation, and an 80% cut in VOC production.

### Letterkenny Army Depot, PA

Comparing data from 2009 (before becoming a satellite site) and 2010 (as a satellite site), LEAD documented the following:

- 25% decrease in prewash consumption
- 17.73% decrease in CARC topcoat consumption
- 9.25% decrease in interior epoxy consumption

Overall, LEAD consumed fewer gallons of coatings despite more labor hours throughout 2010.

### Marine Corps Logistics Base, Barstow, CA

Has experienced a 40% transfer efficiency improvement with 20% projected cost savings.

## Costs & Equipment

### Initial Start-Up Cost

To get set up as a satellite site, the costs are based on a variety of factors such as size of facility, number of painters, etc.

This initial cost includes:

- Training of instructors
  - Instructors must first be trained as STAR4D certified painters. Upon successful completion of painter certification, potential instructors will go through the Train-the-Trainer course to become certified instructors.
- Equipment
  - VirtualPaint® virtual reality training simulator
  - LaserPaint® training tools
  - STAR4D student and instructor manuals

### Annual Renewal Cost

Renewal cost includes:

- Yearly satellite site fee for continuation and support
- Instructor recertification cost (must be recertified every two years)



STAR4D is part of the Iowa Waste Reduction Center at the University of Northern Iowa. The program is managed by the United States Marine Corps Corrosion Prevention and Control.



[www.star4d.org](http://www.star4d.org)  
319-277-4668





# M27 Infantry Automatic Rifle

5.56 mm x 45





## M27 Infantry Automatic Rifle 5.56 mm x 45

The M27 Infantry Automatic Rifle is a variant of the HK416. The HK416 was originally developed by Heckler & Koch for U.S. special operations forces as a major product improvement of M4/M16-type carbines and rifles. Using the HK-proprietary gas piston system found on the company's G36 rifle, the HK416 prevents propellant gases and carbon from fouling the weapon's interior, making it the most reliable of any M4/M16 type weapon.

During the last decade, the HK416 has been combat proven in Southwest Asia and has also gained the attention of military, law enforcement, and security users outside of the U.S. In April 2007, the HK416 was selected as the new Norwegian Army rifle.

The HK operating system, as well as other improvements made to various components and parts ensure reliability and performance in all scenarios, with all types of ammunition, with all barrel lengths, and with and without sound suppressors attached. An innovative free-floating four-quadrant rail system/handguard designed by HK allows all current accessories, sights, lights, and aimers used on M4/M16-type weapons to be fitted to the HK416. This HK rail system handguard can be installed and removed without tools.

The HK416 uses barrels produced by Heckler & Koch's famous cold hammer forging process. The highest quality steel is used in this unique manufacturing process producing a barrel that provides superior performance with minimal degradation of accuracy and muzzle velocity even after thousands of rounds are fired.

Many HK416 variants also have "OTB" (over the beach) features and can be safely fired after being submerged in water and not completely drained. In addition to the improvements in the baseline weapon, HK has produced corrosion resistant steel and polymer magazines and a proprietary buffer to further enhance functional reliability.

### M27 EQUIPPED OR INTEGRATED AT SERVICE LEVEL WITH:

- KNIGHT'S ARMAMENT CO. 600 METER MICRO/BACKUP IRON SIGHTS
- BLUE FORCE GEAR SLING RAIL MOUNT & VCAS SLING
- AIM MANTA RAIL COVERS
- HARRIS LARUE TACTICAL BIPOD WITH QUICK DETACH OR GRIPOD
- U.S.-STYLE BLANK FIRING ADAPTOR (BFA)
- OPERATOR'S MANUAL
- OTIS CLEANING KIT
- U.S. GOVERNMENT 30-ROUND MAGAZINES (HK MAGAZINES OPTIONAL)
- TRIJICON SQUAD AUTOMATIC WEAPON DAY OPTIC (S.D.O.)
- USMC BAYONET



### TECHNICAL DATA

NSN	1005-01-579-5325
Manufacturer	Heckler & Koch / HK416 variant
Caliber	5.56 NATO (.223 Caliber)
Length	33.5–37.5 inches
Weight	8.16 pounds (weapon only) Approximately 12.67 pounds (weapon, 30-round loaded magazine, accessories including: iron sights, SDO optic, PEQ 1B, VCAS sling, QD 9-13" bipod, vertical foregrip, and rail cover set)
Barrel	16.5 inches, cold hammer forged with bayonet lug
Twisting	1 in 7 inches, right hand twist, 6 grooves
Sights	As assigned by USMC — Knights Armament Company 600 meter backup iron sights (BUIS)
Optic	As assigned by USMC — Trijicon S.D.O., 3.5 x 30 mm, 100–1,000 meter reticle with quick ranging feature and close range Ruggedized Miniature Reflex (RMR)
Rail system	1-piece quad (M1913 Picatinny) Free Floating Rail System / 11" length
Buttstock	6-position adjustable with storage space
Operation	Air-cooled, gas operated, short stroke piston driven operating rod, firing from a closed bolt
Selector	Safe, Semi, Automatic / Ambidextrous
Magazine	30-round U.S. government magazines (HK magazines optional)
Muzzle velocity	Approximately 2,900 FPS (with M855 ammunition)
Rates of Fire:	Cyclic: Approximately 700-900 RPM Sustained: Approximately 36+ RPM Semi: Approximately 45 RPM Automatic: Approximately 90+ RPM (3-5 round burst)
Accuracy	Test guns with 15,000 rounds have fired 2 MOA with M855 ammunition
Single fire	Single fire: Less than 4 MOA (averages 2.5 MOA with M855 ammunition)
Automatic fire	Less than 8 MOA with 5-round burst (averages 5.5 MOA with M855 ammunition)
Graduated Range	Iron sight graduated effective range: 600 meters Optic graduated effective range: 1000 meters
Maximum range	Approximately 3,545 meters
Barrel life	15,000 rounds minimum
Parts life	10,000 rounds minimum
Other	Equipped with "Over the Beach (O.T.B.)" features and other enhancements

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› PRODUCT CATALOG



# HK45 & HK45 Compact Pistols

A recent Heckler & Koch semi-automatic pistol design, the HK45 is available as both a full-size and compact model. The HK45 and the HK45 Compact were developed as product improvements of the highly-regarded and ultra-reliable HK USP45 and USP45 Compact family of pistols that were introduced in the 1990s. HK45 series pistols are assembled in the USA from a combination of German and American made components.

New user-inspired enhancements found on the HK45 and HK45 Compact are also present on several recent Heckler & Koch semi-automatic pistols, including the P30, P30L, P2000, and P2000 SK. These features include changeable backstraps, improved Picatinny MIL-STD-1913 accessory rails, better ergonomics, and more ambidextrous controls.

The HK45 and HK45 Compact were originally developed as candidates for the Joint Combat Pistol (JCP) and Combat Pistol (CP) programs administered by the U.S. military in their search for a new service handgun.

Well-suited for personal defense use, the HK45 and HK45C (Compact) are available in, or can be converted to, a wide variety of variants that use different trigger firing modes, including DA/SA (double action/single action) and DAO (double action only). The DAO mode uses the unique Heckler & Koch LEM (Law Enforcement Modification) firing system for improved double action trigger pull.

By using the modular approach to the internal components first pioneered by HK on the USP, the control lever function of the HK45 can be switched from the left to the right side of the pistol to accommodate left-handed shooters (additional parts required). Left and right mounted control levers provide safety and/or decocking functions as required and can be fitted to the pistol simply by changing parts. For true ambidextrous use, a control lever can also be mounted on both sides of the pistol if required. Extensively tested and operationally proven, the HK45 Series is a new paradigm for Heckler & Koch handgun design and manufacturing.



Polygonal bore for increased velocity, easier cleaning, and longer barrel life

HK45  
Caliber .45 ACP

Ambidextrous controls with dual slide releases and enlarged magazine release

The full-size frame model of the HK45 measures 8.03 inches (204 mm) in overall length with a 4.47 inch (113.5 mm) barrel. Despite its "full-size" designation it is smaller than both the USP45 and USP40/9.

Patented Lock-Out Safety device and interchangeable backstraps



Contoured and radiused machined steel slide with forward slide grooves (front cocking serrations) and anti-glare longitudinal ribs (top)

The HK45 is the first Heckler & Koch model manufactured in the company's American factory in Newington, New Hampshire.

The HK45 uses the an ergonomic profile grip similar to the recently introduced HK P30.

An improved USP-style control lever, a combination safety and decocking lever, is frame mounted on the HK45 and is quickly accessible. The HK45 control lever has a positive stop and returns to the "fire" position after decocking.

## NOT AVAILABLE IN SOME STATES



**MODULAR BACKSTRAPS**  
Each HK45 comes standard with an extra backstrap; medium and small interchangeable backstraps ensure an optimal fit for most shooter's hands and complement the ergonomic profile grip.



**Q-RING FOR ACCURACY**  
HK45 and HK45 Compacts have proprietary Q-ring barrels for precise barrel-to-slide lockup and optimal accuracy. HK45 and HK45 Compact barrels are made using the famous HK cold-hammer forging process.



**PICATINNY RAIL FOR ACCESSORIES**  
Integral MIL-STD-1913 (Picatinny) rail molded into the polymer frame dust cover for mounting lights, laser aimers, and other accessories. HK45 shown with SureFire weaponlight.

Low profile slide and slimline, compact dimensions

Standard low profile drift adjustable three dot sights are luminescent

Barrels made using the famous HK proprietary cold hammer forging process last tens of thousands rounds longer than competing models. O-ring barrels on HK45 and HK45 Compact ensure precise barrel-to-slide lockup for greater accuracy.

**NOT AVAILABLE IN SOME STATES**

Double action/single action model with a frame mounted control lever. Also available as a "slick-sides" double action only (DAO) model using the HK LEM (Law Enforcement Modification) firing system for improved double action trigger pull.

"No-slag" bobbed hammer

Interchangeable backstraps allows custom fit for all shooters.

**NEW**

**HK45 Compact Tactical .45 ACP** with threaded barrel, 10-round magazine with extended floorplate, and grip backstrap



An HK45 Compact Tactical configured with a "decock only" control lever was recently adopted by a major U.S. special operations component.

**HK45 Compact**  
Caliber .45 ACP



The HK45 Compact is functionally identical to the HK45 with a shorter barrel/slide and a shorter, "slim line" grip. Shown with an 8-round magazine.

One piece machined slide made from nitro-carburized steel corrosion resistant "Hostile Environment" blued finish

Polygonal bore profile for increased velocity, easier cleaning, and longer barrel life

P30L identical to standard P30 but with 1/2 inch longer slide, barrel, and sight radius



**P30 Caliber 9 mm**  
(also in .40 S&W)

Tested endurance ...one sample P30 9 mm fired more than 91,000 rounds in a recent reliability trial

**P30 AND P30L NOT AVAILABLE IN SOME STATES**



**P30L (Long Slide)**  
Caliber 9 mm

Ambidextrous controls with dual slide releases and enlarged magazine release

Corrosion proof fiber-reinforced polymer frame with changeable backstrap inserts and grip panels

Picatinny rail for installing accessories

P30 "S" models have ambidextrous safety levers

Conventional double action/ single action (DA/SA) with a centrally located decocking button (right). Multiple trigger firing modes on the P30 Series include HK's Law Enforcement Modification (LEM) enhanced double action only.



P30 with changeable backstrap inserts and grip panels (lateral plates) for custom fit



15-round 9 mm magazine

## P30 and P30L Pistols

Recent HK pistol designs, the P30 and P30L (Long Slide) are modern police and security pistols that combine function and safety. Ergonomic features include a special frame with interchangeable backstraps and lateral grip panels, allowing the pistol to be individually adapted to any user. Multiple trigger firing modes include HK's Law Enforcement Modification (LEM) enhanced double action only and conventional double action/single action with a serrated decocking button located on the rear of the frame. Light trigger pull (4.5 pounds, V2) models are also available.

Other ambidextrous controls include dual slide and magazine release levers. A Picatinny rail molded into the front of the frame makes mounting lights and accessories easy and convenient. Extensively tested, the P30 Series have already been adopted by several European police agencies. Excellent weight and balance make both the P30 and P30L naturally pointable, easy to control, and accurate to shoot. The P30 and P30L are both available in 9 mm and .40 S&W. "S" models\* of the the P30 and P30L have ambidextrous safety levers.

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## P2000 and P2000 SK Pistols

The first of the many recent additions to the Heckler & Koch handgun line, the P2000 and P2000 SK (Subcompact) incorporate features of the successful HK USP Compact pistol with the latest innovations of HK engineers. A refinement of a design created for several European police agencies, the P2000 and P2000 SK are available with a traditional double-action/single-action trigger mode and the LEM (Law Enforcement Modification) trigger system first introduced by HK in 2001 on the USP Compact "LEM" model.

The HK Law Enforcement Modification trigger system combines the advantages of a cocked striker component (constant level of trigger pull from first to last round fired) with a double-action hammer system.

Using such an enhanced trigger system consolidates ease of use and safety into a convenient, innovative trigger operation—one that reduces the chance of unintended firing. And in case of an ammunition-related failure to fire, all that is needed is an additional second or third squeeze of the trigger without the need of first pulling the slide back to re-cock the pistol. The enhanced LEM trigger system combines the reliability of a double

action revolver trigger with the crisp trigger of a single action pistol. On variants using the conventional double-action/single-action (DA/SA) mode of operation, an ambidextrous decocking button is mounted on the left, rear portion of the frame. It allows the user to safely lower the hammer from the cocked single-action position to the uncocked double-action position. This DA/SA variant of the P2000 and P2000 SK is readily identifiable by the presence of the serrated decocking button and spurred hammer.

A set of simple-to-install modular grip inserts allow all P2000/P2000 SK models to be custom-fitted to any shooter's hand. An ambidextrous magazine release and dual slide release levers make handling P2000 Series pistols natural and easy for right and left-handed shooters alike.

The addition of "industry standard" mounting rails to the P2000 and P2000 SK allows the widest variety of lights, aimers, and accessories to be added by sliding them onto the open rail system. The HK P2000 US model uses widely available, reliable USP Compact magazines. The same magazines fit the P2000 SK for added firepower.

### LAW ENFORCEMENT MODIFICATION (LEM) TRIGGER SYSTEM

Developed especially for a U.S. government agency, the Law Enforcement Modification (or LEM for short), is a unique trigger mechanism created specifically to improve the trigger performance and reduce the weight of the Double-Action Only (DAO) trigger pull in the P2000 SK, P2000, P30/P30L, USP, USP Compact, and HK45/HK45 Compact pistols. With this mechanism, HK pistols can be fired like a standard DAO semi-automatic pistol where every round is fired by simply pulling the trigger fully rearward with the hammer starting at the forward rest position. The design of the proprietary HK LEM system allows the weight of the DAO trigger pull to be reduced to a smooth and constant 7.5-8.5 pounds because the two-part hammer is precocked every time the slide moves rearward. Further reductions in trigger pull (to the 4.5 pound range) are possible using HK installed refinements.

Choice of conventional DA/SA or LEM trigger mode on the P2000 and P2000 SK. Double action/single action variant of the P2000 and P2000 SK is readily identifiable by the presence of the serrated button and spurred hammer (left pistol, below). LEM (DAO) model appears on the right.



P2000 SK 9 mm  
with 10-round magazine

Flat floorplate magazine  
for concealment

Three dot sights for quick  
target acquisition, optional  
tritium sights available



P2000 SK can also use  
high capacity USP  
Compact magazines  
(shown with accessory  
"X-Grip" magazine sleeve).



Polygonal bore for increased velocity, easier cleaning, and longer barrel life

Ambidextrous slide release (located on both sides of the frame)

Low profile slide and slimline, compact dimensions

Modular grip panels options include extra large, large, medium (standard), and small to fit all sizes of hands

**P2000 .40 S&W**  
with 12-round magazine

Trigger pull on LEM models is 7.3-8.5 pounds. Trigger pull can be adjusted by an HK armorer to the 5.5 pound range.

Industry-standard mounting rails allows a wide selection of accessories to be installed (see below)

Ambidextrous magazine release lever

Patented Lock-Out Safety device



**HK PISTOLS PASS THE TOUGHEST TEST**

The P2000, P2000 SK, and the USP Compact LEM were subjected to the most punishing pistol evaluation to date by the Department of Homeland Security's Immigration and Customs Enforcement branch. The evaluation was performed with the most potent ammunition loads for three calibers (9 mm, .40 S&W and .357 SIG). After three million rounds were fired, HK finished ahead of five other competing manufacturers, earning a "Superior" technical rating. On August 20, 2004, HK was awarded the largest pistol contract in U.S. law enforcement history. Five months later, US Customs and Border Protection (CBP), the largest U.S. federal law enforcement agency, officially adopted the P2000 pistol in .40 S&W, replacing both legacy Glock 17s and Beretta 96Ds.

**GRIP PANELS**

Exchangeable grip panels (back straps) accommodate a wide variety of hand sizes and shooting grips.



small



medium



large



extra large

Smallest HK pistol made, available in full power .40 S&W, 9 mm, and .357 SIG chamberings.

Ambidextrous slide release lever

No snag, bobbed hammer for effective concealment

Industry standard mounting rails allow lights, aimers, and other accessories to be installed by sliding them onto the open rail system

"Variant 2" LEM (Law Enforcement Modification) enhanced double action trigger pull of 7.3 pounds. Also available in conventional double action/single action trigger mode with decocking button located on the back of the slide

**P2000 SK .40 S&W**  
with 9-round magazine

Exchangeable back straps for modular grip

Extended rubber floorplate magazines available

Patented Lock-Out Safety device

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## USP and USP Compact Pistols

The HK USP (Universal Self-loading Pistol) is the first HK pistol designed especially for American shooters. Features favored by the U.S. military, law enforcement agencies, and civilian users provided the design criteria for the USP. Its controls are uniquely American, influenced by such famous designs as the Government Model 1911 pistol.

The control lever, a combination safety and/or decocking lever, is frame mounted and quickly accessible, unlike the slide mounted safeties common on many semi-automatic pistols.

Using a modified Browning-type action with a special patented recoil reduction system, the USP is built to take the punishment of powerful +P and +P+ loads. Full-size USPs have an HK proprietary recoil reduction system that lessens recoil effects on pistol components and also lowers the recoil forces felt by the shooter. The USP recoil reduction system is insensitive to ammunition types and requires no special adjustment or maintenance. It functions effectively in all USPs regardless of caliber.

By using a modular approach to the internal components, the control lever function of the USP can be switched from the left to the right side of the pistol for left-handed shooters. The USP can also be converted from one type of trigger firing mode to another. This includes combination double-action and single-action (DA/SA) modes, double action only (DAO) modes, including the HK proprietary LEM (Law Enforcement Modification) enhanced trigger system.

The USP is available in both full-size frame and compact models with ten trigger/firing mode configurations and four calibers—.45 ACP, .40 S&W, 9 mm, and .357 SIG (special order).

Developed in parallel with the USP, the HK Mark 23 was originally designed in the 1990s for the U.S. military's Special Operations Command. It has the unique distinction of being the only .45 ACP pistol to enter American military service since the venerable Model 1911A1.

Major metal components on the USP and USP Compact are protected from wear and corrosion by HK's special Hostile Environment (HE) finish.

All USP and USP Compacts have polygonal barrel profiles made by cold-hammer forging—ensuring increased barrel life and optimal accuracy.



**USP40**  
Caliber .40 S&W

Reinforced polymer frame. HK pioneered the use of composite materials in production handguns more than thirty-five years ago with the development of the VP70Z and P9S pistols.



**USP45 Tactical**  
Caliber .45 ACP



**USP9 SD 9 mm**  
shown with optional  
accessory suppressor

**CONVERTIBLE FIRING MODES**  
The USP & USP Compacts can be converted from one type of trigger firing mode to another. This includes combination double-action and single-action modes and double action only modes. USP and USP Compacts are currently available in three calibers and ten trigger / firing mode configurations, including the enhanced double action LEM (Law Enforcement Modification) mode.

USP and USP Compact	Auto Mode	DA/SA	DAO	LEM	9 mm	.40 S&W	.45 ACP
Variant 1	•	•	•	•	•	•	•
Variant 2	•	•	•	•	•	•	•
Variant 3	•	•	•	•	•	•	•
Variant 4	•	•	•	•	•	•	•
Variant 5	•	•	•	•	•	•	•
Variant 6	•	•	•	•	•	•	•
Variant 7	•	•	•	•	•	•	•
LEM	•	•	•	•	•	•	•
Variant 8	•	•	•	•	•	•	•
Variant 9	•	•	•	•	•	•	•
Variant 10	•	•	•	•	•	•	•



A threaded HK polygonal barrel increases muzzle velocity and service life, while reducing bore fouling and easing cleaning. An O-ring ensures optimal slide-to-barrel lockup for superior accuracy.

One piece machined steel slide protected by an HK proprietary "maritime" coating that prevents surface corrosion.

The frame mounted Mark 23 decocking lever is separate from the ambidextrous safety lever and allows the hammer to be lowered quietly and safely from the single action position.

Molded into the frame are special accessory grooves for attaching a light or laser aimer.



During U.S. military testing, Mark 23 pistols met the most stringent operational and accuracy requirements ever demanded of a combat handgun. Endurance testing demonstrated a service life of over 30,000 rounds of +P ammunition.

**Mark 23  
Caliber .45 ACP**

The USP-type mechanical recoil reduction system reduces recoil forces to the shooter and components of the pistol by as much as 30%.

When the hammer is down, the ambidextrous frame mounted safety lever is locked in the fire position so that the pistol is always ready for double action operation. When the hammer is "cocked and locked" in single action mode with the safety lever on "safe", the decocker is blocked so that the pistol is always ready for single action operation.

Reinforced polymer frame

Patented Lock-Out Safety device available on all HK pistols



**USP45 Compact  
Tactical .45 ACP**  
with threaded barrel



**USP40 Compact  
.40 S&W**  
shown with UTL (weapon light)



**USP9 Compact  
9 mm**

USP45 Compact model is only 5% larger than 9 mm and .40 caliber USP Compact models.

The extended slide release is contoured to reduce wear and tear on clothing when the pistol is carried concealed.

The control lever has a positive stop and automatically returns to the "fire" position after decocking. The control lever, featured on many variants of the USP and USP Compact, allows these pistols to be safely carried "cocked and locked."

HK proprietary mounting grooves allow a variety of accessories to be mounted without pistol modification.

USP/USP Compact ambidextrous magazine release lever is shielded by the trigger guard from inadvertent actuation. It can be easily operated using the thumb or index finger without changing the grip of the firing hand.

Bobbed, spurless hammer for no-snag concealability

**USP45 Compact  
Caliber .45 ACP**  
also available in .40 S&W,  
9 mm, and .357 SIG (special order)

Grip dimensions on USP Compacts are well-suited to shooters with small hands.



**CONTROL LEVER**

A frame-mounted control lever allows these pistols to be safely carried "cocked and locked." Single control lever function can be changed to four opposite side for left-handed users. Control lever can be installed on both sides of the pistol for complete ambidextrous function.



**LOW RECOIL**

The USP's patented recoil reduction system was tested and proven in the HK Mark 23 pistol issued to the US Special Operations Command. On the shorter USP Compact, the mechanical recoil reduction system found on full-size USPs has been replaced by a specially designed flat compression spring contained in the captive recoil spring assembly by a polymer elastomer bushing. Service life is still engineered to exceed 20,000 rounds.



**LOCK-OUT SAFETY DEVICE**

HK pistols feature the patented HK Lock-Out Safety Device. When engaged, it locks the handgun's action by blocking any movement of the hammer strut and slide. The handgun is locked and cannot be fired until unlocked.

# SL8-6 Rifle and USC Carbine

A revolutionary rifle design—the HK SL8-6 is constructed almost entirely of a reinforced carbon-fiber polymer. Based on the combat-proven G36 rifle used by the German Army, the SL8-6 uses a proven short stroke, piston-actuated gas operating system, well known for simplicity and reliability.

Designed and engineered to deliver exceptional shooting performance, the SL8 is a favorite among European target shooters, due in large part to its modular construction and free-floating bull barrel. A short Picatinny rail mount is standard and allows accessory optics to be easily added. Made using the famous HK cold-hammer forging process, the SL8-6 barrel ensures accuracy and long life. The ergonomic and clean lines of the HK SL8-6 are functional and modern, giving the SL8-6 the look and feel of a 21st Century firearm.

Derived from the HK UMP submachine gun, the USC is a civilian utility

carbine that uses the classic hard-hitting .45 ACP cartridge. Matched with the simple and ultra-reliable blowback operating system, the HK USC is a radical departure from traditional firearms designs.

Extensive use of the same durable, reinforced polymers used on HK's line of military and police arms ensures lightweight and durability. And the highest grade of weapons steel is used where it matters—in the cold hammer forged target barrel and the solidly constructed bolt mechanism.

User ergonomics are not sacrificed. The skeletonized buttstock is topped with a comfortable rubber cheek rest and recoil pad. The web of the pistol grip is open for a comfortable shooting handhold. Hard points located on the top and front of the receiver make attachment of optional Picatinny rails easy, allowing almost any kind of sighting system or accessory to be mounted. For a .45 ACP carbine designed and engineered for the toughest tasks, choose the HK USC.



**NOT AVAILABLE IN SOME STATES**

### Accessories for SL8-6 and USC





# MR556A1/MR762A1 Rifles

The civilian semi-automatic MR556A1 and MR762A1 are direct descendants of the HK416/HK417 Series developed by Heckler & Koch for military and law enforcement use. The MR models, available in calibers 5.56 x 45 mm and 7.62 x 51 mm respectively, are major product improvements over conventional AR-type carbines and rifles.

The semi-automatic MR Series rifles use the HK proprietary gas piston operating system, employing a piston and a solid operating "pusher" rod in place of the gas tube normally found in AR15/M16/M4-style firearms. This method of operation virtually eliminates malfunctions that are common with direct impingement gas systems since hot carbon fouling and waste gases do not enter the receiver area. This is the same key feature critical to the success of the HK416/HK417 rifles used by leading military and law enforcement customers.

The MR Series use many of the same assemblies and accessories originally

developed for the HK416/417 including the HK free-floating four-quadrant rail system. This handguard system allows all current accessories, sights, lights, and lasers used on M4/M16-type weapons to be fitted to the MR Series. The HK rail system can be installed and removed without tools and returns to zero when reinstalled. MR Series rifles are produced in the USA from American and German-made components. Additionally, subassemblies like the MR556A1's upper receiver are fully interchangeable with other high quality AR-style firearms.

Like the HK416 and HK417, the MR Series rifles use barrels produced by Heckler & Koch's famous cold hammer forging process. The highest quality steel is used in this manufacturing process, producing a long life barrel that provides superior performance with minimal degradation of accuracy and muzzle velocity after prolonged use. MR Series rifles and MR556A1 Upper Receiver Kits are currently available from Heckler & Koch.

**MR556A1 5.56 mm Rifle**  
with 16.5 inch barrel

MR Series rifles use the same Free Floating Rail System as HK416/417, ensuring no rezeroing

MR556A1 shown with HK diopter sights.

HK-proprietary gas piston operating system prevents propellant gases and carbon fouling from entering into the receiver area, increasing the reliability of the rifle. Same identical operating system used on the selective fire HK416 and HK417.

Accessory HK pistol grips for a custom fit. MR rifles can also accommodate standard grips made for M16/M4/AR15 type weapons.

10 and 30-round steel magazines available

Essentially semi-automatic versions of the HK416/417 Series, the MRs are excellent choices as law enforcement patrol carbines.

MR762A1 shown with HK flip-up front sight and diopter rear sight

German made cold hammer forged barrel ensures long service life

**MR762A1 7.62 mm Rifle**  
with 16.5 inch barrel

10 and 20-round high strength polymer magazines

MR Series rifles have ambidextrous selector levers

The HK adjustable buttstock has a storage compartment for extra batteries and other mission essential gear

MR762A1 sales configuration (shown with optional scope)

An MR556A1 Upper Receiver Kit includes a complete barrel assembly, HK Free Floating Rail System handguard, bolt carrier assembly, buffer, and buffer spring allowing most AR-style rifles to be retrofitted to HK's pusher-rod system.

Like the HK416/417, the MR556A1/MR762A1 series match the performance and durability of their famous selective fire counterparts and are proven in all conditions - sand, mud, snow, and water.

The MR556/MR762 series uses a wide assortment of accessories that fit the HK416 and other AR-type arms, including grips, buttstocks, sights and magazines. To purchase HK accessories, visit [www.hkusa.com](http://www.hkusa.com).

# HK MP5 Submachine Guns

Developed by Heckler & Koch in the mid-1960s, the 9 mm MP5 submachine gun uses the same delayed blowback operating system found on the famous HK G3 automatic rifle. Reliability, accuracy, ease of handling, simple maintenance, and safety — all the elements of HK excellence are highlighted on the MP5. Firing from the closed-bolt position in all modes of fire make MP5 submachine guns extremely accurate and controllable.

All HK MP5 models are manufactured using time-tested Heckler & Koch technological innovation and superior materials. Barrels are made using cold hammer forging, a process pioneered and perfected by HK. Machined and stamped high strength steel and modern polymers make up the rest

of the MP5. Continual product improvements over more than 40 years of production have kept the MP5 up-to-date and technologically current; it is firmly established as the world's pre-eminent submachine gun among military and law enforcement users.

Over 120 MP5 variants are available to address the widest range of tactical requirements. A selection of optional trigger groups allow for single fire only, full automatic, 2-round, and 3-round burst options. The weapon's unique modular design and a variety of optional buttstocks, forearms, sight mounts, and other accessories gives the MP5 extraordinary flexibility to meet most any mission requirement.

<p><b>SEF Trigger Group</b></p> <p>3 safe                  2 single fire (semi-automatic)                  Full automatic</p>	<p><b>Numerical Trigger Group</b></p> <p>3 safe                  1 single fire (semi-automatic)                  20/25 fully automatic</p>	<p><b>SF (Single Fire) Trigger Group</b></p> <p>semi-automatic                  3 safe</p>	<p><b>2-3-2 Trigger Group</b></p> <p>two round burst                  semi-automatic                  3 safe</p>
<p><b>0-1-3 Trigger Group</b></p> <p>three round burst                  semi-automatic                  3 safe</p>	<p><b>Navy Trigger Group</b></p> <p>fully automatic                  semi-automatic                  3 safe</p>	<p><b>2-Round Burst Trigger Group</b></p> <p>fully automatic                  two round burst                  semi-automatic                  3 safe</p>	<p><b>3-Round Burst Trigger Group</b></p> <p>fully automatic                  three round burst                  semi-automatic                  3 safe</p>

**MP5 TRIGGER GROUPS** SEF trigger groups have a single safety/selector lever on the left side, all other groups have safety/selector levers on both sides.



**MP5-N 9 mm**  
with "Navy" trigger group  
(NSN:1005-01-360-7146)

The Navy model was developed for the elite U.S. Navy SEAL Teams. 1 MP5 Navy models have threaded barrels and can be used with or without an optional wet technology stainless steel sound suppressor.



**MP5KA4 9 mm**  
with 3-round burst trigger group  
(NSN: 1005-01-259-2895)

The MP5K is the ultimate close quarters weapon. At 4.4 pounds and less than 13 inches long, the MP5K is easily concealed and carried. All MP5Ks can be fitted with an optional folding buttstock and some models can be fired from inside a specially designed briefcase.



Accessory claw-lock scope mount and optional reflex sight. HK scope mounts attach to MP5 submachine guns without tools at special points that ensure 100% return to zero. HK scope mounts do not interfere with the use of the weapon's iron sights.

MP5 Universal Retractable Buttstock in extended position. MP5s can be fitted with a variety of buttstock options including receiver caps, retractable, fixed, and folding buttstocks. The Universal MP5 Retractable Buttstock has extended forks and dual rear sling attachment points.



Optional tactical forearm light can be mounted on most HK submachine guns and rifles.

Magazine clamp holds additional magazine

**MP5A3 (F Model) 9 mm**  
shown with optional  
0-1-2 trigger group

0-1-2 Trigger Group includes "automatic double-tap" 2-round burst capability. Optional extended safety/selector lever shown

Optional front and rear Tritium sights available

Ported barrel lowers velocity and sound signature of departing projectiles



The MP5SD uses an integral aluminum sound suppressor. Due to its ported barrel, it does not require use of subsonic ammunition for effective sound reduction like most conventional sound suppressed submachine guns. The removable sound suppressor is integrated into the weapon's design and conforms to the normal length and profile of a conventional, unsuppressed submachine gun.

Ambidextrous pictographic trigger group with safe, single fire, 2-round burst, and full automatic

**MP5SD3 9 mm**  
with integral aluminum sound suppressor  
(NSN: 1005-01-144-3036)

30-round steel magazine



**MP5SF A2 9 mm**  
with Single Fire trigger group



**MP5 9 mm**  
with optional  
folding stock and  
2-round burst trigger group

The MP5SF (single fire) carbine is a semi-automatic only variant of the MP5 fitted with a trigger group that prevents full automatic firing. Single Fire (SF) trigger group can be replaced with other MP5 trigger groups to allow burst and full automatic firing.

The MP5's modular design allows for easy installation of a wide variety of optional buttstocks, forearms, sight mounts, and other accessories for any mission requirement. The optional Modular Rail System forearm (above) accepts rail mounted accessories including those of the U.S. SOPMOD kit.



## UMP Submachine Guns

A truly modern submachine gun, the UMP is made using the latest in advanced polymers. Available in 9 mm and also chambered for more powerful cartridges (.45 ACP and .40 S&W), the UMP is a cost-effective, state-of-the-art weapon that offers the advantages of lightweight, low cost, uncompromising reliability, and modularity. Like all HK submachine guns,

the UMP fires from the closed bolt position for accuracy and safe handling. Available as a select-fire submachine gun or semi-automatic only carbine, the HK Universal Machine Pistol was designed especially for American law enforcement and military organizations in mind and includes a bolt catch to hold the bolt rearward when last round is fired.

Flip-up rear sight with peep and Patridge apertures. Adjustable for windage and elevation with an Allen wrench.

Closed bolt operation ensures rifle-like accuracy at extended ranges. Bolt incorporates forward assist notch and firing pin safety.

Quick Connect muzzle for fast accessory attachment without the needs for muzzle threads.

Folding stock with rubber cheek-piece and buttpad. The UMP can be fired with the stock folded.

Textured pistol grip with internal storage space

Oversized trigger guard for easy operation while wearing gloves.

Tough, lightweight, 30-round polymer magazine with ammunition viewing strips.

Eight molded-in hard points for accessory rail attachment on the upper receiver

UMP40 Caliber .40 S&W with Navy trigger group



(Left) A large selection of accessories are available for the UMP.

(Right) The UMP fieldstrips into basic assembly groups with the removal of a single locking pin, making clearing and maintenance fast and simple.







A passive internal firing pin block within the bolt prevents the weapon from firing if dropped.

Molded in hard points for accessory Picatinny rail attachment

Barrel replaceable by the user.

The 9mm model of the UMP, the compact, lightweight (4 1/2 pounds) UMP9 submachine gun includes many of the same characteristics found on the UMP40 and UMP45 models. It utilizes a 30-round curved polymer magazine, folding buttstock, bolt catch, and fully ambidextrous controls as well as a user replaceable barrel.

9mm UMP uses a curved 30-round polymer magazine with ammunition viewing strips.

UMP 9 mm with "Navy" trigger group

**UMP 9 MM MODEL  
"LARGE ORDER AVAILABILITY ONLY"  
CONTACT HK FOR MORE INFORMATION**



Detachable hooded front sight post. Optional tritium sights are also available.

Operating controls like those of other HK weapons simplifies training.

Optional Picatinny rail allows a wide variety of scopes and aiming devices to be easily mounted

Polymer construction reduces weight and eliminates surface corrosion.

Optional aluminum Quick Connect sound suppressor mounts on the UMP's hammer forged barrel in seconds.

UMP45 .45 ACP with "Navy" burst trigger group

Optional vertical foregrip mounted on accessory Picatinny rail

Extended ambidextrous safety/selector lever combined with Pictogram firing mode markings

Oversized ambidextrous magazine release. Operating controls similar to those of other HK weapons.

**UMP TRIGGER GROUPS** | all UMP groups are completely ambidextrous and have safety/selector levers on both sides.

SP Single Fire Trigger Group	B-B Trigger Group	Navy Trigger Group	2-Round Burst Trigger Group
<ul style="list-style-type: none"> <li>— semi-automatic</li> <li>⊗ safe</li> </ul>	<ul style="list-style-type: none"> <li>— two round burst</li> <li>— semi-automatic</li> <li>⊗ safe</li> </ul>	<ul style="list-style-type: none"> <li>— fully automatic</li> <li>— semi-automatic</li> <li>⊗ safe</li> </ul>	<ul style="list-style-type: none"> <li>— fully automatic</li> <li>— two round burst</li> <li>— semi-automatic</li> <li>⊗ safe</li> </ul>



## MP7A1 Personal Defense Weapon

Smaller than a conventional submachine gun, the 4.6 mm MP7 A1 is a compact and lightweight Personal Defense Weapon that can be carried like a handgun yet is capable of rifle-like effectiveness.

The HK-developed 4.6 mm x 30 ammunition provides the penetration approaching that of an assault rifle round and is able to defeat the types of body armor frequently found in the hands of terrorists and criminal gangs, in particular that of the former Soviet Bloc special forces, now the standard NATO test target (CRISAT).

In response to the NATO PDW requirement document D29, HK developed a Personal Defense Weapon system that will penetrate the CRISAT vest, comprised of 1.6 mm titanium plates and 20 layers of Kevlar, out to 200 meters and beyond.

Adopted and fielded by several of the world's leading special operations units, the gas-operated MP7 A1 fires from the closed bolt position, using a rotary locking bolt system similar to that of the HK G36 assault rifle to contain the powerful 4.6 mm cartridge.

The MP7 A1 handles like a pistol yet allows targets to be engaged like a rifle. With its 7-inch barrel, the HK MP7 A1 is capable of firing 10-shot semiautomatic groups at 45 meters of less than 2 inches. Unlike competing designs, the conventional and fully ambidextrous design of the MP7 A1 ensures immediate acceptance by all users.

The MP7 A1 is manufactured predominantly of carbon fiber reinforced polymer with embedded metal components where needed. The weapon can be field stripped in seconds without tools and requires little cleaning due to its unique gas system.

The lethal 4.6 mm x 30 cartridge produces minimal felt recoil (50% of a 9 mm NATO round) to assure that multiple hits are easily obtainable in all modes of fire — incapacitating the target through penetration and permanent tissue destruction.

The MP7 A1 is fitted with a removable full length MIL-STD-1913 (Picatinny) rail on the top of the receiver for mounting a variety of optional targeting devices. Optional forearm rails are also available. Standard folding mechanical peep sights can be fitted to the top rail or an optional 24-hour reflex sight can be attached in seconds without tools. The reflex sight provides a single red aiming dot for 24-hour use when the weapon is fired from the shoulder or at arms length like a handgun.

Special carrying devices are available for overt and discreet carry of the MP7 A1. Due to its lightweight, small size and minimal width the MP7 A1 is especially suitable for VIP protection details, pilots, drivers, guards, and support personnel who require hands-free carry of their defensive weapon while performing other tasks.



A 4.6mm steel ball round will penetrate a CRISAT target (the equivalent of a Soviet special forces bullet-proof vest) at 200 meters.



Kevlar helmet penetrations at 200 meters. The same 4.6 mm cartridge easily passes through automobile windshields with minimal deflection.



MP7A1 size comparison...smaller than a submachine gun and only slightly larger than a conventional handgun.





The size of the MP7A1 make it ideal for air crew, drivers, and support personnel.



A wide variety of accessories include suppressors and specialized sights.



Carry options include concealed carry fags, multi-purpose or elastic slings, and thigh holsters.



33 gr. Ullinza Combat (UC) 40 gr. Full Metal Jacket (FMJ) 33 gr. Police Hollowpoint

Several ammunition types are available for a variety of mission requirements.



## HK416 Carbine & Rifle System

The HK416 was developed by Heckler & Koch for US special operations forces as a major product improvement of M4/M16-type carbines and rifles. Using the HK-proprietary gas piston system found on the G36, the HK416 does not introduce propellant gases and carbon fouling back into the weapon's interior, making it the most reliable of any M4/M16 type weapon.

The HK416 has been combat proven in Southwest Asia and has also gained the attention of military, law enforcement, and security users outside of the US. In April 2007, the HK416 was selected as the new Norwegian Army rifle.

The origins of the HK416 began with the realization of the deficiencies of the direct gas impingement (gas tube) operating system found on conventional M4/M16-style weapons. Input from the users of current M4/M16-type arms, high-speed video assessment, and extensive live-fire testing in extreme operational environments such as the U.S. Army Desert Proving Ground in Yuma, Arizona revealed multiple areas for improvement.

Improvements were made to the internal operating system and various component parts, improving reliability in best and worse case scenarios, with all types of ammunition, with all barrel lengths, and with and without sound suppressors attached. An innovative free-floating 4-quadrant rail system/handguard designed by HK allows all current accessories, sights, lights, and aimers used on M4/M16-type weapons to be fitted to the HK416. This HK rail system can be installed and removed without tools.

The HK-proprietary gas system uses a piston driving an operating rod to control the function of the bolt, preventing propellant gases and

the associated carbon fouling from entering the weapon's interior. This increases the reliability of the weapon and extends the interval between stoppages. It also reduces operator cleaning time, heat transfer to the bolt and bolt carrier, and wear and tear on critical components.

The HK416 uses a barrel produced by Heckler & Koch's famous cold hammer forging process; further improving reliability, service life, and operator safety during obstructed bore occurrences or in extreme extended firing sessions. The highest quality steel is used in this unique manufacturing process producing a barrel that provides superior accuracy for more than 20,000 rounds with minimal degradation of accuracy and muzzle velocity. HK416 variants are available with 10.4, 14.5, 16.5, and 20 inch (264, 368, 419, 508 mm) barrels. Some HK416 variants also have "OTB" (over-the-beach) capability and can be safely fired after being submerged in water and not completely drained.

In addition to the improvements in the baseline weapon, HK has produced corrosion resistant steel and polymer magazines as well as a proprietary buffer system to further enhance functional reliability. An HK add-on 40 x 46 mm grenade launcher module can also be quickly attached to the rail system without tools. For training, the proven and fielded HK Safety Blank Firing Attachment and Live Round Excluder kit can be used with all HK416 variants, eliminating the possibility of live rounds being loaded into and fired through a standard issue weapon outfitted for blank firing only.

As the leading AR-based weapon system, the HK416 is unsurpassed in durability, safety, and accuracy. It is also the most cost-effective AR type weapon when viewed through total life cycle analysis.



HK416 robustness is proven in all environmental conditions...sand, mud, snow, and water.



The HK416 accepts all accessories that fit M4-type weapons, including the HK Grenade Launcher Module.



A piston driven operating system is the key to the HK416's reliability.



The HK-proprietary gas system does not introduce propellant gases and the associated carbon fouling and heat back into the weapon's interior. This increases the reliability of the weapon, the service life of parts, and reduces operator cleaning time.

Optional HK diopter sights (front & rear)

Special buffer and buffer spring for reliable function

HK-designed 5-position buttstock with battery compartments and ergonomic recoil pad

**HK416 5.56mm Carbine**  
with 10.4 inch barrel

Beveled magazine well for quicker magazine changes

HK Steel Magazine (fits all M16 and M4-type weapons)

HK ergonomic pistol grip with internal storage compartment

HK pictographic firing mode markings

**CURRENTLY FIELDIED**

The HK416 was jointly developed by U.S. military users and HK under a "no-cost" contract. The HK416 can use the same accessories, optical sights, detachable tactical lights, and laser modules commonly employed on M16 and M4-type weapons. HK416s are currently fielded in combat operations in Southwest Asia by various branches of the U.S. military and other government agencies.

Minimum 15,000 rounds service life of all parts

Accessory telescopic sight for M27 configuration

**HK416 5.56mm Carbine**  
16.5 inch barrel model shown in M27 configuration with optional accessories



HK416 accepts a variety of pistol grips and buttstock options

HK416 uses most standard AR-type magazines

"Over-the-beach" capability of the HK416 is assured by the use of a bolt that fully supports the cartridge case.

HK-designed free-floating 4-quadrant rail system allows all standard accessories and sights to be fitted to the HK416 and can be removed without tools by the operator. Bore-sight retention is ensured when reinstalled.

Accessory bipod for M27 configuration



The HK416 Steel Magazine has been combat proven by U.S. Special Operations and foreign military units worldwide. Its reliability has been demonstrated by extensive testing in arctic, desert, jungle, and maritime environments. Features include a well-executed design, quality materials, a special anti-friction surface finish, advanced spring, attention to production tolerances, and a heat-treated steel magazine housing and follower. For use in the most extreme environments, a special maritime coating resists saltwater corrosion. During this test, the HK steel magazines were exposed to a 100-hour salt fog test and stored three days at ambient temperature. After this test procedure each magazine was fully loaded with 30 rounds and fired twice with no problems experienced. In U.S. military testing the HK steel magazine improved feeding reliability of M4-type carbines by 30-50% overall. A new "high reliability" lightweight HK polymer magazine (not pictured) has also been developed.



Accessory HK416 Upper Receiver Kit (includes receiver/barel/rail system, buffer/recoil spring, complete bolt group, and HK steel magazine)



HK416 5.56 mm with 10.4 inch barrel



HK416 5.56 mm with 16.5 inch barrel



HK416 5.56 mm with 14.5 inch barrel



HK416 5.56 mm with 20 inch barrel



## HK417 Carbine & Rifle System

The HK417 was designed as a Commercial-Off-The-Shelf (COTS) alternative to existing, competing 7.62 x 51 mm semi-automatic and select-fire rifles, carbines, and sniper rifle systems. The .30 caliber "big brother" to the combat proven 5.56 mm HK416, the HK417 shares similar operating control locations, assembly/disassembly, and appearance to current issue M16/M4-type weapons resulting in immediate transfer of skills from one weapon system to another while retaining the already learned muscle memory critical to proficient marksmanship and operation in high stress environments.

The HK417 is gas operated and uses a gas piston and a solid operating "pusher" rod in place of the common gas tube normally employed in AR15/M16/M4-style weapons. Pioneered by Heckler & Koch in the G36 and HK416, this method virtually eliminates malfunctions common to direct impingement gas systems since hot carbon fouling and waste gases do not enter the receiver area. The HK417 stays cleaner and heat transfer to bolt components is drastically reduced. The service life of all parts, including the barrel, is increased substantially.

The achieved goal of the HK417 is to guarantee no parts failures or stoppages in less than 10,000-15,000 rounds with little or no accuracy degradation. The HK417 adjustable gas system also makes the weapon less sensitive to ammunition and barrel length changes, or when sound suppressors are employed.

During HK-conducted desert testing, a single HK417 fired more than 15,000 documented rounds of assorted ammunition, including M118LR, M80 ball, M993 AP, and assorted commercial ammunition with bullet weights ranges from 125 to over 175 grains without a single parts failure or stoppage.

The HK417 is available with 12, 16, and 20-inch barrels, all manufactured using HK's famous proprietary cold-hammer forging process. The standard, hardened chrome-lined barrel is available in 12-inch or 16-inch lengths. For

optimal accuracy, a specially treated chrome-lined 16- or 20-inch barrel is an option.

These optional barrels have resulted in less than 1 Minute Of Angle (MOA) groups. All three barrel lengths have conventional land and groove bore profiles with a 1 in 11-inch twist and are designed to function reliably with bullet weights ranging from less than 147 to 175 grains. HK417 barrels are threaded for flash hiders, muzzle compensators, and for sound suppressor attachment.

Both 10- and 20-round translucent polymer box magazines have been developed for the HK417. These magazines will drop free and can be inserted into the beveled magazine well with a conventional upward motion and not the rocking motion common on some 7.62 mm rifles.

An HK designed multi-position retractable buttstock provides a comfortable sloping cheek piece, multiple battery storage compartments, and enhanced non-slip rubber recoil pad. Ambidextrous operating controls are standard on the HK417, including the charging handle and an ambidextrous lever selector.

Semiautomatic and fully-automatic modes of fire are available as a standard feature. All manner of existing accessories, including sights, laser aimers, pistol grips, slings, etc. can be fitted to the common attachment points and/or the MIL-STD-1913 Free-Floating Rail System (FFRS) found on the HK417.

This patented HK417 rail system is user removable and mirrors that of the HK416. The HK Free-Floating Rail System can be removed without special tools by the operator and ensures 100% return to zero for all mounted accessories. The rail system accepts the same quick-detachable 40 x 46 mm HK grenade launcher used on the HK416.

While operationally fielded, the HK417 is still in advanced development.

An HK design multi-position retractable buttstock provides a comfortable sloping cheek piece, multiple battery storage compartments, and enhanced non-slip rubber recoil pad.



Accessory sound suppressor

Ergonomic pistol grip with storage compartment

20-round high strength polymer magazine drops free when released

HK417 7.62 mm Carbine with 12 inch barrel and optional accessories





HK Grenade Launcher Module (GLM) can be quickly attached to the rail system of HK417 carbines and rifles by the operator in seconds without tools.



Accessory HK pistol grips for a custom fit can also be installed on the HK417. Both the HK417 and HK416 can accommodate standard pistol grips made for M16/M4/AR15 type weapons.



A gas regulator can be easily activated by the operator in the field and is especially useful when employing sound suppressors (S = Suppressor, N = Normal).

Similar to the proprietary system found on the HK416, the HK417 gas system does not introduce propellant gases and the associated carbon fouling and heat back into the weapon's interior. This increases the reliability of the weapon, the service life of parts, and reduces operator cleaning time.

Like the HK416, the HK417 has familiar M16/M4/AR15 ergonomics and controls.



Barrel can be changed in under two minutes with simple tools. HK417 barrels are cold hammer forged and chrome-lined and use a conventional land and groove bore profile with 1/11 inch twist—threaded for flash hiders, muzzle compensators and for sound suppressor attachment.

HK free-floating 4-quadrant rail system allows bipods and a wide variety of accessories and sights to be fitted to the HK417.

**HK417 Caliber 7.62 mm x 51** Rifle with 20 inch barrel and optional accessories



**HK417 Caliber 7.62 mm x 51** with 12 inch barrel (shown with optional HK diopter sights)

(Right) The HK adjustable buttslock has a storage compartment for extra batteries and other mission essential gear.



**HK417 Caliber 7.62 mm x 51** with 20 inch barrel (shown with no sights)



**HK417 Caliber 7.62 mm x 51** with 16 inch barrel (shown with accessory optical sight)

**HK417  
CURRENTLY IN ADVANCED  
DEVELOPMENT**



## HK G36 Weapon System

Developed by HK in the mid 1990s, the G36 is a true modular weapon system in caliber 5.56x45mm NATO (.223 Remington). Constructed almost entirely of a tough, carbon fiber reinforced polymer material and using a simple, clean shooting, self-regulating operating rod gas system, the G36 provides the user with a lightweight weapon that delivers high performance with extremely low maintenance. The barrel of the G36 can be

exchanged by unit armorers to create a rifle, carbine, compact carbine, or light support variant using the same common receiver. Exhaustively tested and currently fielded with the German and Spanish Armed Forces (including the NATO Rapid Reaction Force), the G36 is also used by a variety of U.S. law enforcement and military customers.

The low mass of the bolt and ergonomic in-line relationship of the barrel and the buttstock translate to a highly-controllable weapon when fired in the fully automatic mode of fire.

Picatinny rail with adjustable iron sights

Six hard points for attaching accessory Picatinny rails (bottom rail has accessory vertical foregrip attached)



**G36C 5.56 mm Compact Carbine** with buttstock extended

The G36C Compact Carbine is actually shorter than an MP5 with the buttstock folded (shown below). It is the perfect 5.56mm weapon for use in small spaces, such as vehicular use.

The G36 gas system does not direct fouling back into the weapon's interior like conventional gas operated rifles. This insures reliable operation even after firing more than 15,000 rounds without cleaning. The polymer components can easily be cleaned with water-based cleaning solutions, or even water.

Tough 30-round translucent polymer magazines lock together without magazine clamp.

**G36C 5.56 mm Compact Carbine** with buttstock folded and optional Aimpoint reflex sight



**G36 5.56 mm Rifle** with 1.5x Export optical sight (sight available by special order)



SET Trigger Group	SF (Single Fire) Trigger Group	R-1-2 Trigger Group	Navy Trigger Group	2-Round Burst Trigger Group
Single 2 single fire (semi-automatic) Fully automatic	Semi-automatic Fully automatic	Two round burst Semi-automatic Fully automatic	Fully automatic Semi-automatic Safe	Fully automatic Two round burst Semi-automatic Fully automatic

G36 TRIGGER GROUPS



Optional modular rail system from allows a wide array of accessories including lights and sights to be added.

Ambidextrous cocking lever

Mechanical sights "co-witness" through reflex sight



G36 5.56 mm rifle with 18.9 inch barrel

Magazines clamp together without accessory clamp

Ambidextrous two round burst trigger group shown. Five different trigger groups available (see chart).



G36K 5.56 mm Carbine with 12.5 inch barrel buttstock folded

Special 4-prong flash hider virtually eliminates muzzle flash.

Integral cartridge case deflector doubles as a buttstock retainer when the stock is folded.

Right side folding buttstock allows for normal operation and firing when folded.



G36 ACCESSORIES

Adjustable 1000 meter mechanical sight is standard. A MIL-STD-1913 Picatinny rail allows assorted optical sights to be mounted.

The folding cocking handle can be used to lock the bolt group during stoppage clearing

Folding front sight is adjustable for elevation and windage.



MG4E 5.56 mm Light Machine Gun

Ambidextrous safety & selector lever with safe and fully automatic "fire" positions

Downward case ejection with brass deflector

An MG4 prototype successfully fired a total of 104,000 rounds using only a single barrel.

Side folding buttstock with large storage compartment and shoulder support

The MG4 has a "quick change" barrel, allowing barrels to be safely changed even when hot. The barrel assembly incorporates a folding carrying handle.



**ANY CONDITIONS, ANY CLIMATE**  
HK MG4s have been developed and tested in the most severe conditions; they are currently being used operationally in southwest Asia and the Balkans.

Sturdy folding bipod is fully adjustable



MG4EK short barrel (15.8") variant

## HK Light Machine Guns

With the MG4, HK continues its tradition of producing rugged machine guns with superior accuracy and reliability. Additional attributes of the MG4 are simplicity and lightweight. The MG4 was selected for fielding by the German military and is currently being used operationally.

usa website: [www.hk-usa.com](http://www.hk-usa.com) 21



## Grenade Launchers

Utilitarian engineering, ultra-reliable function, and enhanced accuracy characterize all models of the HK 40mm grenade launcher family. Combat-proven designs, Heckler & Koch grenade launchers use simple break-open actions and rifled barrels. These lightweight launchers fire a variety of low velocity ammunition, including CS, HE, AP, less lethal and flares to ranges

of 400 meters with a degree of accuracy not available from competing designs. More than 30,000 Heckler & Koch grenade launchers have been in service since 2000 with the military forces of Britain, the Netherlands, Spain, Germany, and Portugal.

Sights attach directly to the M320's receiver ensuring the zero (aiming/impact point) of the launcher is preserved when it is removed and reinstalled on another weapon or when its used in stand-alone mode. A ranging Day/Night Sight (DNS, NSN 1010-01-564-0735) made by Insight Technology Inc. of Londonderry, NH provides accurate target engagement out to 300 meters. A simple mechanical ladder sight can also be used.



HK grenade launchers can be fired without a stock using a special bungee sling.

Short 8.5 inch barrel provides accuracy and maximum effective range equal to or better than the US M203.

Removable folding foregrip attaches to integrated Picatinny rail



**HK M320 40 x 46 mm Grenade Launcher (GL)**  
(available to non-U.S. Army customers as GLM & GLM/SAM)

M320 shown in "stand-alone configuration" with detachable five-position buttstock.

Universal receiver allows the operator to attach various weapon adapters in seconds without tools.

On November 6, 2008, the U.S. Army "type-classified" the HK M320, opening the way for the first of 70,000 add-on grenade launchers to be issued to combat troops. This award came after more than three years of exhaustive developmental testing and user evaluation at the Army's Aberdeen Test Center in Aberdeen, Maryland, the U.S. Army Infantry Center at Fort Benning, Georgia, and Army test locations throughout the world. The M320 is a multi-functional single shot launcher that can be attached to a wide range of current issue U.S. weapons including the M4, MAA1 and M4 MWS carbines and M16A2 and M16A4 rifles as well as an assortment of HK weapons (HK416 and HK417). The M320 is currently fielded in U.S. combat operations.



M4 Carbine with HK Grenade Launcher (GL Model 'AG-M4'). M320A1 includes M4 adapter kit, NSN 1010-01-557-2542



M16A4 Rifle with HK Grenade Launcher (GL Model 'AG-M16A4'). M320 includes M16 adapter kit, NSN 1010-01-566-9083



HK416 carbine with HK Grenade Launcher (GL Model 'AG-HK416')



HK Grenade Launcher adapter kits



HK grenade launchers are extremely versatile and can be employed for law enforcement and non-military security applications. The "side-loading" operation of the HK169 and other HK single-shot grenade launchers enable them to handle the complete range of riot control gas and less-lethal ammunitions.

Lightweight at less than four pounds, the HK169A is designed to fire a variety of low velocity 40mm ammunition (including CS, HE, AP, nonlethal, and flares) to ranges of 400 meters with a degree of accuracy not available from competing designs.

Simple and robust, the HK169 is well-suited for use in the harshest conditions.

Mechanical sight is adjustable for windage and elevation and can easily be removed.

**HK169 40mm Grenade Launcher**  
(shown with folding buttstock extended)

Picatinny rail for mounting accessories, including grips, aimers, and optional optics

Ambidextrous safety lever

**NEW**

Double action trigger

Buttstock folds to the right allowing the HK169 to be fired and reloaded with the stock folded

Side-loading breech enables the operator to view the loading and unloading process without rolling the weapon over, helps to ensure positive and speedy reloads, and allows the use of extended length cartridges.

Folding mechanical sight is adjustable for windage and elevation and mounts on either the right or left side of the weapon. Optional glass block sight also available.

Rifled aluminum barrel for increased range, accuracy, and durability



**AG-C/EGLM 40mm Grenade Launcher**  
(shown with detachable buttstock)

Sturdy detachable, retractable stock for use as stand alone grenade launcher

Spring actuated side loading breech provides for fast and easy loading.

The AG-C/EGLM can be used with the add-on buttstock or attached to a wide variety of weapons with a modular rail system.

Double action only trigger

Ambidextrous breech release lever



AG-C 40mm attached to M4-type carbine



M4 carbine with AG-C 40mm

**MODULAR COMPATIBILITY**  
Side-loading "add-on" HK grenade launchers fire all low velocity 40 x 46 mm ammunition and can be mounted on a wide variety of weapons, including various G36 models and M4-type carbines.



AG-C/EGLM (AG-C) attached to a G36 rifle

# Grenade Machine Gun (GMG)

Used in combat operations in both Afghanistan and Iraq by select U.S. special operations units and adopted by the military forces of several NATO countries, the HK Grenade Machine Gun has outperformed competing models in overall durability, ease of use, precision targeting, and safety. And the HK GMG is available as a series production unit below the purchase cost of competing systems.

Its advanced features, excellent accuracy, operator convertible feed direction and removable barrel, night fighting capability with NVGs, and unmatched operator safety features are all unique hallmarks of the HK GMG.

The HK GMG uses an aluminum receiver for reduced weight and manufacturing costs. Other features include a fluted chamber for equal pressure on cartridge case and positive extraction and ejection, advanced primer ignition, and a barrel that is easily removable for field stripping without the use of tools. This is also an advantage in the event that an HE projectile becomes lodged in the bore.

The bolt reciprocates on a massive guide rod and is stabilized by two steel rails, all of which are bolted to the receiver, eliminating the need for welding in the receiver.

The HK GMG upper mount (gun cradle) readily mounts to standard U.S. tripods, various vehicle mounts, or the lightweight, adjustable HK aluminum

tripod. The HK tripod provides low-to-high height position settings as well as provisions for the use of a ballast sack to reduce tripod movement during firing from the high standing position, as when firing from behind cover such as a wall or berm.

The upper mount also provides a wider, more stable set of control grips with ambidextrous firing levers, and an adjustable shoulder support. This enables the operator to quickly index and accurately engage multiple and/or moving targets during free gun firing.

Clearing the gun simply consists of lifting the feed tray cover and removing the belt. The position of the ambidextrous charging handle allows the shooter to cock and clear the gun without reaching near the ammunition belt and feed way.

Both the gun and tripod can be easily transported in a "backpack" configuration by a two-man team.

The HK GMG is also perfectly suited to vehicle turret and helicopter mounting. It is both accurate and easy to use, with an extremely smooth feed cycle and impressive safety features.

It is flexible, convertible to right or left-side feeding, and simple to maintain— with no tools being required for stripping or reassembly. All in all, a complete solution to the demanding requirements of effective ground fire support.



### EASY SET-UP

The HK GMG can quickly and easily be assembled and ready for use.

The adjustable stabilizing shoulder rod is mounted on the receiver for additional controllability and accuracy during free gun firing.

The GMG's muzzle velocity is 790 feet/second (241 meter/second) with a maximum range of 7218 feet (2200-meters) at an approximate rate of fire of 350 rounds/minute.

A robust, recoil operated inertia bolt with advanced primer ignition, firing from an open bolt position, directly chambers the cartridges out of the belt. The bolt fires all types of available 40 x 53mm grenades in either semi or fully automatic firing modes. Semi-automatic fire increases hits of target while reducing rounds fired.

The modular trigger group is easily replaced with a solenoid for remote-controlled fire, when vehicle or helicopter mounted.



### UPPER MOUNT (GUN CRADLE)

The upper mount buffers the recoil using twin hydraulic buffers and includes handles, a secondary trigger lever, a shoulder support rod, the attachment points for the sighting system, and the mounting for the ammunition box.



### GMG IN WIDE USE

The HK Grenade Machine Gun has been adopted by the armed forces of more than fifteen countries, including Germany, the UK, Canada, Finland, Ireland, Sweden, and the Netherlands. Since 2002, it has seen extensive operational use.



### FEED SYSTEM

Driven by the bolt, the system feeds and guides the linked cartridges in two smooth movements during the forward and rearward movement of the bolt. The feed direction can be readily reconfigured from the right-side to left-side by the operator in the field in minutes, without the use of tools.

## SAFETY FEATURES

**Safety/fire selector lever** - The safety/fire selector lever features the settings safe, semi-automatic fire, and fully automatic fire. Setting the selector at "safe" blocks the trigger and locks the bolt in its cocked position.

**Loading safety** - Opening the feed cover prevents the bolt from traveling forward endangering the operator's hands.

**Bolt lock** - This locks the bolt in position and permits the operator to safely clear the GMG.

**Firing pin safety** - This independent safety system ensures that the firing pin cannot strike the primer until the cartridge is fully supported in the chamber.

**Cocking safety** - When the bolt is not pulled back completely, accidental firing is prevented by an integral, automatic mechanism which stops the bolt from traveling forward.





**COMBAT PROVEN**  
The HK GMG is fielded and serving operationally in Southwest Asia in all conditions and environments.



**FLEXIBLE DEPLOYMENT**  
GMGs can be mounted on a variety of vehicles (left). Tripod mounted GMGs in "high position" can shoot through windows or over barricades (right).



Quick detachable glass block reflex sight for rapid aiming and target engagement, for ranges up to 1,500-meters is available. Night fighting capability is possible using the reflex sight with NVGs. The GMG also has a folding mechanical 600 meter or 1500 meter sight.

Four multiple Picatinny-type accessory rails

The receiver uses a solid extruded aluminum design, combining light weight with strength.

Cold hammer forged barrel with fluted chamber. Removable by operator in seconds without tools.



**WEIGHT COMPARISON HK GMG versus U.S. MK19**

Weight (lbs)		
- Gun	64.0	75.6
- Cradle	24.0 ?	1.0 (MK64)
- Tripod	39 (with T&E)	44.0 (M3)
Total System Weight	127.0	140.6
(11% weight reduction for HK GMG)		

A lightweight tripod is available which permits a wide range of firing positions and heights, maximizing the gun's tactical flexibility. The GMG may also be fitted to the U.S. M3 tripod or other mounts using the standard pintle mounting socket.

Linked 40 x 53 mm ammunition is fed from a NATO PA 120 ammunition box with a capacity of 32 rounds. The GMG ammunition box weighs 44 pounds (20 kg) with 32-rounds of belted ammunition. The ammunition box holder attaches directly to the HK upper mount and enables removal of the GMG from the mount while the box holder remains attached. It can easily be changed from the right side to the left side of the weapon.

Aluminum tripod weighs 33 pounds (15-kg)

**SPECIFICATIONS**

MODEL	CALIBER	CYCLIC RATE OF FIRE	MAGAZINE CAPACITY	MODES OF FIRE	SIGHTS	WIDTH	HEIGHT	WEIGHT w/MAGAZINE	BARREL LENGTH	OVERALL LENGTH
GMG	40 x 53 mm	350 rpm	32 rd box	S, F	D	8.90in	8.19 in	63.93 in	18.74 in	46.46 in

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MILITARY/ LAW ENFORCEMENT/CIVILIAN

SPECIFICATIONS

HANDGUNS	Caliber	Cyclic Rate of Fire	Magazine Capacity	Modes of Fire	Sights	Grips or Stocks	Width (approx.)	Height (approx.)	Weight With Empty Magazine	Sight Radius (approx.)	Barrel Length	Overall Length
HK45	.45ACP		10	S	fixed	adj. backstrap	1.54 in / 39 mm	5.47 in / 139 mm	1.95 lb / .88 kg	6.63 in / 168.5 mm	4.46 in / 113.5 mm	8.01 in / 204 mm
HK45 Compact	.45ACP		8/10	S	fixed	adj. backstrap	1.54 in / 39 mm	5.51 in / 140 mm	1.78 lb / .81 kg	6.00 in / 152.5 mm	3.93 in / 99 mm	7.36 in / 188 mm
HK45 Compact Tactical	.45ACP		8/10	S	fixed	adj. backstrap	1.14 in / 29 mm	5.21 in / 133 mm	1.82 lb / .83 kg	6.00 in / 152.5 mm	4.57 in / 116 mm	7.91 in / 201 mm
P50	9mm x 19		15	S	fixed	fully adjustable	1.77 in / 44.8 mm	5.43 in / 138 mm	1.61 lb / .74 kg	5.84 in / 148.5 mm	3.85 in / 98 mm	7.12 in / 181 mm
P50	.40S&W		15	S	fixed	fully adjustable	1.77 in / 44.8 mm	5.43 in / 138 mm	1.63 lb / .74 kg	5.84 in / 148.5 mm	3.85 in / 98 mm	7.12 in / 181 mm
P50	9mm x 19		15	S	fixed	fully adjustable	1.77 in / 44.8 mm	5.43 in / 138 mm	1.72 lb / .78 kg	6.42 in / 163 mm	4.45 in / 113 mm	7.71 in / 196 mm
P50	.40S&W		15	S	fixed	fully adjustable	1.77 in / 44.8 mm	5.43 in / 138 mm	1.72 lb / .78 kg	6.42 in / 163 mm	4.45 in / 113 mm	7.71 in / 196 mm
P2000S2	9mm x 19		10	S	fixed	adj. backstrap	1.37 in / 34.8 mm	4.51 in / 115.5 mm	1.56 lb / .68 kg	5.19 in / 131.5 mm	3.28 in / 83 mm	6.40 in / 162.5 mm
P2000S2	.40S&W		9	S	fixed	adj. backstrap	1.27 in / 31 mm	4.51 in / 115.5 mm	1.59 lb / .68 kg	5.19 in / 131.5 mm	3.28 in / 83 mm	6.40 in / 162.5 mm
P2090	9mm x 19		10/11	S	fixed	adj. backstrap	1.37 in / 34.8 mm	4.67 in / 119 mm	1.58 lb / .71 kg	5.55 in / 141 mm	3.66 in / 93 mm	6.85 in / 174 mm
P2090	.40S&W		10/11	S	fixed	adj. backstrap	1.37 in / 34.8 mm	4.67 in / 119 mm	1.58 lb / .71 kg	5.55 in / 141 mm	3.66 in / 93 mm	6.85 in / 174 mm
USP Compact	9mm x 19		10/11	S	fixed	fixed	1.38 in / 35 mm	4.80 in / 122 mm	1.41 lb / .73 kg	5.11 in / 129 mm	3.58 in / 91 mm	6.81 in / 173 mm
USP Compact	.40S&W		10/12	S	fixed	fixed	1.38 in / 35 mm	4.80 in / 122 mm	1.72 lb / .78 kg	5.11 in / 129 mm	3.58 in / 91 mm	6.81 in / 173 mm
USP Compact	.45ACP		8	S	fixed	fixed	1.41 in / 35 mm	5.01 in / 127 mm	1.76 lb / .80 kg	5.01 in / 127 mm	3.28 in / 84 mm	7.08 in / 180 mm
USP	9mm x 19		10/11	S	fixed	fixed	1.26 in / 32 mm	5.11 in / 129 mm	1.78 lb / .77 kg	6.27 in / 158 mm	4.25 in / 108 mm	7.68 in / 195 mm
USP	.40S&W		10/11	S	fixed	fixed	1.26 in / 32 mm	5.11 in / 129 mm	1.81 lb / .82 kg	6.27 in / 158 mm	4.25 in / 108 mm	7.68 in / 195 mm
USP	.45ACP		10/12	S	fixed	fixed	1.26 in / 32 mm	5.61 in / 142.5 mm	2.18 lb / .99 kg	6.34 in / 161 mm	4.41 in / 112 mm	7.91 in / 201 mm
USP S&D (Tactical)	9mm x 19		10/11	S	fixed	fixed	1.36 in / 34 mm	5.50 in / 140 mm	1.76 lb / .80 kg	6.52 in / 165 mm	4.86 in / 123.5 mm	8.40 in / 213 mm
USP Tempo	.40S&W		10/11	S	large	fixed	1.36 in / 34 mm	5.51 in / 141 mm	1.81 lb / .82 kg	6.52 in / 165 mm	4.90 in / 124.5 mm	8.52 in / 216 mm
USP Tactico	.45ACP		10/12	S	fixed	fixed	1.36 in / 34 mm	5.50 in / 140 mm	2.01 lb / 1.02 kg	6.71 in / 171 mm	5.09 in / 129 mm	8.64 in / 219 mm
USP TIT	.45ACP		8	S	fixed	fixed	1.38 in / 35 mm	5.04 in / 128 mm	1.75 lb / .80 kg	5.63 in / 143 mm	3.28 in / 84 mm	7.08 in / 180 mm
WARR 21	.45ACP		12	S	fixed	fixed	1.51 in / 38 mm	5.00 in / 127 mm	2.46 lb / 1.12 kg	7.79 in / 198 mm	5.87 in / 149 mm	9.43 in / 240 mm

SEMI-AUTOMATIC RIFLES

S&B	.223		10	S		fixed	2.36 in / 60 mm	9.84 in / 250 mm	9.26 lb / 4.2 kg	17.65 in / 448 mm	20.00 in / 508 mm	38.58 in / 980 mm
U2C	.41ACP		10	S	0	fixed	2.17 in / 55 mm	9.75 in / 248 mm	6.86 lb / 3.12 kg	12.80 in / 325 mm	16.00 in / 406 mm	35.43 in / 900 mm
M16A1	5.56mm		10/20/30	S	AS	AS	3.07 in / 78 mm	9.65 in / 245 mm	9.50 lb / 4.33 kg	14.00 in / 355 mm	18.50 in / 469 mm	33.5-37.88 in / 861-962 mm
M16A1	7.62 mm		10/20	S	AS	AS	3.23 in / 81 mm	8.36 in / 213 mm	9.84 lb / 4.46 kg	16.14 in / 410 mm	18.50 in / 469 mm	35.94-39.10 in / 913-993 mm

MILITARY/ LAW ENFORCEMENT

SUBMACHINE GUNS

MP5A2	9mm x 19	800 gpm	15/30	S,F	0	PS	1.96 in / 50 mm	10.23 in / 260 mm	5.97 lb / 2.71 kg	13.38 in / 340 mm	8.85 in / 225 mm	26.22 in / 668 mm
MP5A1	9mm x 19	800 gpm	15/30	S,F	0	PS	1.96 in / 50 mm	10.23 in / 260 mm	7.16 lb / 3.25 kg	13.38 in / 340 mm	8.85 in / 225 mm	25-27.25 in / 635-694 mm
MP5A3	9mm x 19		15/30	S	0	PS	1.96 in / 50 mm	10.23 in / 260 mm	6.00 lb / 2.72 kg	13.38 in / 340 mm	8.85 in / 225 mm	25.65-27.55 in / 651-702 mm
M16-M16S	9mm x 19	800 gpm	15/30	S,F	0	PS	1.96 in / 50 mm	10.23 in / 260 mm	7.16 lb / 3.25 kg	13.38 in / 340 mm	8.85 in / 225 mm	25-27.25 in / 635-694 mm
MP5K	9mm x 19	800 gpm	15/30	S,F	0		1.96 in / 50 mm	10.23 in / 260 mm	4.78 lb / 2.17 kg	13.38 in / 340 mm	4.52 in / 115 mm	14.29 in / 362 mm
MP5K-PDW	9mm x 19	800 gpm	15/30	S,F	0	ICLD	1.96 in / 50 mm	10.23 in / 260 mm	6.50 lb / 2.95 kg	10.23 in / 260 mm	5.51 in / 140 mm	18.5-21.24 in / 469-540 mm
MP5SD1	9mm x 19	800 gpm	11/30	S,F	0	IC	2.63 in / 66 mm	10.23 in / 260 mm	6.54 lb / 2.97 kg	13.38 in / 340 mm	5.26 in / 134 mm	11.65 in / 295 mm
MP5SD2	9mm x 19	800 gpm	15/30	S,F	0	IS-1	4.31 in / 109 mm	10.23 in / 260 mm	6.54 lb / 2.97 kg	13.38 in / 340 mm	5.26 in / 134 mm	26.37-31.69 in / 672-807 mm
UMP9	9mm x 19	600 gpm	10	S,F	0	ICLD	2.40 in / 61 mm	11.02 in / 280 mm	4.96 lb / 2.25 kg	12.80 in / 325 mm	3.87 in / 98 mm	17.71-27.16 in / 451-692 mm
UMP40	.40S&W	600 gpm	10	S,F	0	ICLD	2.40 in / 61 mm	12.09 in / 305 mm	4.96 lb / 2.25 kg	12.80 in / 325 mm	3.87 in / 98 mm	17.71-27.16 in / 451-692 mm
UMP45	.45ACP	600 gpm	7.5	S,F	0	ICLD	2.40 in / 61 mm	12.79 in / 325 mm	5.46 lb / 2.45 kg	12.80 in / 325 mm	3.87 in / 98 mm	17.71-27.16 in / 451-692 mm



MILITARY/ LAW ENFORCEMENT

SPECIFICATIONS

	Caliber	Cyclic Rate of Fire	Magazine Capacity	Modes of Fire	Sights	Grips or Stocks	Width (approx.)	Height (approx.)	Weight With Empty Magazine	Sight Radius (approx.)	Barrel Length	Overall Length
<b>PERSONAL DEFENSE WEAPON</b>												
MP7A1 (PWS)	4.6 x 30 mm	950 rpm	30	S, F	D	RS	1.27 in / 32 mm	6.77 in / 172 mm	6.40 lb / 2.9 kg	12.30 in / 312 mm	7.09 in / 180 mm	16.53-25.19 in / 421-640 mm
<b>RIFLES AND CARBINES</b>												
HK417	5.56 mm	750 rpm	10	S, F	S, O, D	FO, D	2.51 in / 64 mm	16.34 in / 415 mm	6.57 lb / 2.98 kg	13.41 in / 341 mm	8.97 in / 228 mm	19.69-28.34 in / 500-722 mm
HK416	5.56 mm	750 rpm	30	S, F	O, D, S	HA, D	2.51 in / 64 mm	12.59 in / 320 mm	7.58 lb / 3.44 kg		12.51 in / 318 mm	4.21-33.85 in / 617-862 mm
GM4	5.56 mm	750 rpm	30	S, F	O, D, S	FO, D	2.51 in / 64 mm	12.59 in / 320 mm	8.31 lb / 3.77 kg		18.89 in / 480 mm	39.84-39.23 in / 760-1002 mm
HK416 D10RS	5.56 mm	7-900 rpm	20/30	S, F	AS	RS	3.07 in / 78 mm	9.45 in / 240 mm	7.21 lb / 3.27 kg	14.41 in / 371 mm	10.40 in / 264 mm	27.60-31.39 in / 701-797 mm
HK416 D14RS	5.56 mm	7-900 rpm	20/30	S, F	AS	RS	3.07 in / 78 mm	9.45 in / 240 mm	8.24 lb / 3.74 kg	14.41 in / 371 mm	14.50 in / 368 mm	31.45-35.43 in / 804-900 mm
HK416 D16-SB	5.56 mm	7-900 rpm	20/30	S, F	AS	RS	3.07 in / 78 mm	9.45 in / 240 mm	11.4 lb / 5.17 kg	14.41 in / 371 mm	16.50 in / 419 mm	31.40-31.44 in / 801-801 mm
HK416 D20RS	5.56 mm	7-900 rpm	20/30	S, F	AS	RS	3.07 in / 78 mm	9.45 in / 240 mm	9.05 lb / 4.11 kg	20.79 in / 528 mm	19.88 in / 505 mm	37.25-40.83 in / 941-1037 mm
HK417 17 in	7.62 mm	600 rpm	10/20	S, F	AS	RS	3.23 in / 82 mm	8.39 in / 213 mm	6.62 lb / 3.00 kg	16.14 in / 410 mm	12.00 in / 305 mm	31.60-34.84 in / 801-884 mm
HK417 16 in	7.62 mm	600 rpm	10/20	S, F	AS	RS	3.23 in / 82 mm	8.39 in / 213 mm	10.16 lb / 4.61 kg	16.14 in / 410 mm	16.80 in / 426 mm	35.62-38.77 in / 905-985 mm
HK417 20 in	7.62 mm	600 rpm	10/20	S, F	AS	RS	3.23 in / 82 mm	8.39 in / 213 mm	10.93 lb / 4.96 kg	16.62 in / 423 mm	20.00 in / 508 mm	39.45-42.71 in / 1007-1087 mm
<b>LIGHT MACHINE GUN</b>												
MG4	5.56 mm	775 rpm (incl. 10)	30	S, F	AS	RS	5.28 in / 134 mm	8.94 in / 228 mm	17.42 lb / 7.9 kg	19.29 in / 490 mm	12.21 in / 310 mm	40.55-52.66 in / 1030-1340 mm
<b>GRENADE LAUNCHERS</b>												
HK169	40 mm x 46		M	L	FO, D		3.39 x 4.06 in / 86-102 mm	8.14 x 11.04 in / 206-280 mm	3.75 lb / 1.70 kg	6.79 in / 173 mm	9.02 in / 229 mm	12.39-22.60 in / 310-574 mm
HK16	40 mm x 46		M	L, D			3.54 in / 90 mm	8.26 in / 210 mm	4.30 lb / 1.95 kg	5.83 in / 148 mm	13.07 in / 330 mm	13.77 in / 350 mm
HK161 (M)	40 mm x 46		M	L, D			3.50 in / 89 mm	8.07 in / 205 mm	3.30 lb / 1.50 kg	5.83 in / 148 mm	13.07 in / 330 mm	13.07 in / 330 mm
GM (M170)	40 mm x 46		M	L, D, HS			2.56 in / 65 mm	6.35 in / 161 mm	2.80 lb / 1.27 kg	5.83 in / 148 mm	9.44 in / 240 mm	11.20 in / 285 mm
GM5	40 mm x 53	750 rpm	12 rd box	S, F	D		8.90 in / 226 mm	8.19 in / 208 mm	63.80 lb / 28 kg		18.28 in / 464 mm	46.46 in / 1180 mm

**MODES OF FIRE**  
 M - manually operated  
 S - semi automatic  
 2 - 2 round burst  
 3 - 3 round burst  
 F - fully automatic

**SIGHTS**  
 O - optical sight  
 D - diopter/rotary  
 DNS - day/night sight  
 AS - accessory diopter/rotary

**BUTTSTOCK CONFIGURATIONS**  
 KC - receiver cap  
 FS - fixed stock  
 RS - retractable stock  
 FO, DL - folding

SPECIFICATIONS AND MODEL AVAILABILITY SUBJECT TO CHANGE WITHOUT NOTICE.

For over half a century, Heckler & Koch has been a leading designer and manufacturer of small arms and light weapons for law enforcement and military forces worldwide. HK is also the maker of premier brand firearms for the sporting and commercial markets. Its reputation for quality, innovation, and safety make Heckler & Koch a recognized leader in the development of technologically advanced products. And the long term durability of all HK products make them especially cost-effective when subjected to total life cycle cost analysis.

As a major international force, Heckler & Koch has a vision that is simple yet demanding - "To be the world's premier small arms systems company."

With operations in Germany, the United Kingdom, France, and the United States, we continue to meet the ever-evolving needs and requirements of our customers. A major supplier of small arms to several NATO countries, Heckler and Koch is a worldwide leader in market positions for nearly all of its major product categories.

The foundation for everything we do is an unwavering commitment to excellence. This is accomplished through technological leadership, in depth product research and development, responsible marketing, and strategies that create and shape markets. We consider it a fundamental obligation to deliver the best possible products to our customers. The words "No Compromise" are more than a motto, they are the core of our corporate philosophy.

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The American affiliate of Heckler & Koch GmbH of Oberndorf, Germany, Heckler & Koch USA supplies the U.S. military, law enforcement, and commercial market with technologically advanced firearms, logistical support, and specialized design services.

HK Columbus, Georgia serves as Heckler & Koch's primary American location, responsible for commercial/civilian and law enforcement sales, administration, customer support, repair services, and distribution. For more information contact:

#### HECKLER & KOCH

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#### Firearms Safety

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