多武器訓練模擬系統

Multiple Arms Training System

主計算機分系統

- 負責直射/曲射各型武器彈道模擬計算、目標物控制模擬、碰撞射擊結果評分及系統網路資料控制。
- 提供系統監控畫面以確定系統及網路封包資料是否正常運作。
- Windows作業系統，設計具可擴充性。

視效分系統

- 直射武器模擬系統提供六部單槍DLP彩色投射器投射於20米×3米平面螢幕，影像解析度為1400×1050，並負責6組射擊場景視覺顯示資料庫及各型射擊靶紙顯示功能。
- 曲射武器模擬系統提供四部單槍DLP彩色投射器投射於12米×3米平面螢幕，影像解析度為1400×1050，並負責5組射擊場景投資料庫，各型固定/活動目標及爆炸影像顯示功能。
- 前進觀測模擬系統提供兩部單槍DLP彩色投射器投射7米×3米平面螢幕，影像解析度為1400×1050，並負責5組射擊場景視覺資料庫、各型固定/活動目標移動及爆炸影像顯示功能。

音效通訊分系統

- 提供高功率擴大機及5.1聲道喇叭，負責模擬環境音效、射擊音效、爆炸音效及目標物音效。
- 提供由射訓練、前進觀測及射擊指揮所無線通訊模擬功能。
- 提供直射武器/曲射武器主動式射擊席喇叭模擬功能，以增加臨場感。

HOST Computer System

- The host computer is responsible for direct weapon bullets and indirect weapon shells trajectory calculation, targets control, collision detection, shooting result scoring, and system network control.
- Provides system monitor mode to make sure the system is running normally and the network data packet is correct.
- Windows Operation System, upgradeable for the future.

Visual System

- Direct weapon simulator provides 6 DPL projectors to project on 20m×3m display flat screen with 1400×1050 pixels image resolution, and provides 6 game areas display and target sheets for different guns.
- Indirect weapon simulator provides 4 DPL projectors to project on 12m×3m display flat screen with 1400×1050 pixels image resolution, and provides 5 game areas display, fixing targets, movingtargets, and explosion effects.
- Forward observer simulator provides 2 DPL projectors toproject on 7m×3m display flat screen with 1400×1050 pixels image resolution, and provides 5 game areas display, fixing targets, moving targets, and explosion effects.

Sound and communication system

- Provides the amplifier and 5 speakers and is responsible for simulating sound effect of environment, shooting, explosion, and moving targets.
- Provides the radio communication between Indirect weapon simulator, Forward observer simulator, and Fire direction center simulator.
- Provides active speakers for shooting sound effect for Direct/weapon simulator, and 6 active speakers for firing sound effect for Indirect weapon simulator.

教官台分系統

- 全系統之控制中心，可控制各分系統之間關機以及執行射擊訓練時之各項功能設定，包括學員/教官資料、天候環境、訓練場景、目標物、彈藥數等。
- 直射武器模擬系統提供15射擊彈位彈著點顯示、輪帶射跡線顯示、射擊成績顯示及列印功能。
- 曲射武器及前進觀測模擬系統提供20戰場顯示、目標物顯示、觀測所顯示、砲陣地顯示及彈著點顯示功能。

輸出入界面擷取分系統

- 負責處理各型模擬裝備數位/類比輸出入訊號。
- 紅外線影像擷取裝置負責擷取槍枝模擬器之瞄準點。

模擬武器分系統

- 直射武器模擬系統提供15把T91模擬步槍、15把65K2模擬步槍、15把T75模擬班用機槍、15把T74模擬排用機槍、15把50模擬機槍及4組40榴彈模擬器，一台空氣壓縮機以提供射擊後座力模擬。
- 曲射武器模擬系統提供6門60模擬迫砲、4門81模擬迫砲及4門120模擬迫砲、每門迫砲配備瞄準具以提供觀測調整功能。
- 前進觀測模擬系統提供14具模擬觀測望遠鏡及2具模擬雷射測距。

Instructor/Operator Station

- It is responsible for the system training operation control, including trainer/teacher information, environment, training battles, targets, bullets, and artillery shells.
- Direct weapon simulator displays the points of impact, aiming trajectories, scoring, and printing shooting results.
- Indirect weapon and Forward observer simulators display the 2D battle map, targets, forward observation posts, batteries, and points of impact.

I/O interface and IR image capture system

- It is responsible for handling the digital and analog I/O signals, for weapon simulators.
- IR image capture devices are responsible for acquiring the IR signals for the gunnery simulators.

Simulated rifle, machine gun, and mortar System

- Direct weapon simulator provides fifteen T91 rifle, fifteen 65K2 rifle, fifteen T75 machine gun, fifteen T74 machine gun, fifteen 50 machine gun, and four 40 rifle grenade gunnery simulators, and provides 1 air compressor to simulate shooting recoil.
- Indirect weapon simulator provides six 60 mortar, four 81 mortar, and four 120 mortar simulators, and provides mortar sight for each mortar to simulate observation and adjustment.
- Forward observer simulator provides fourteen field glasses simulators, and two laser range finder simulators.