



Fort Benning, Home of the MCoE

Gunnery Update

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Agenda



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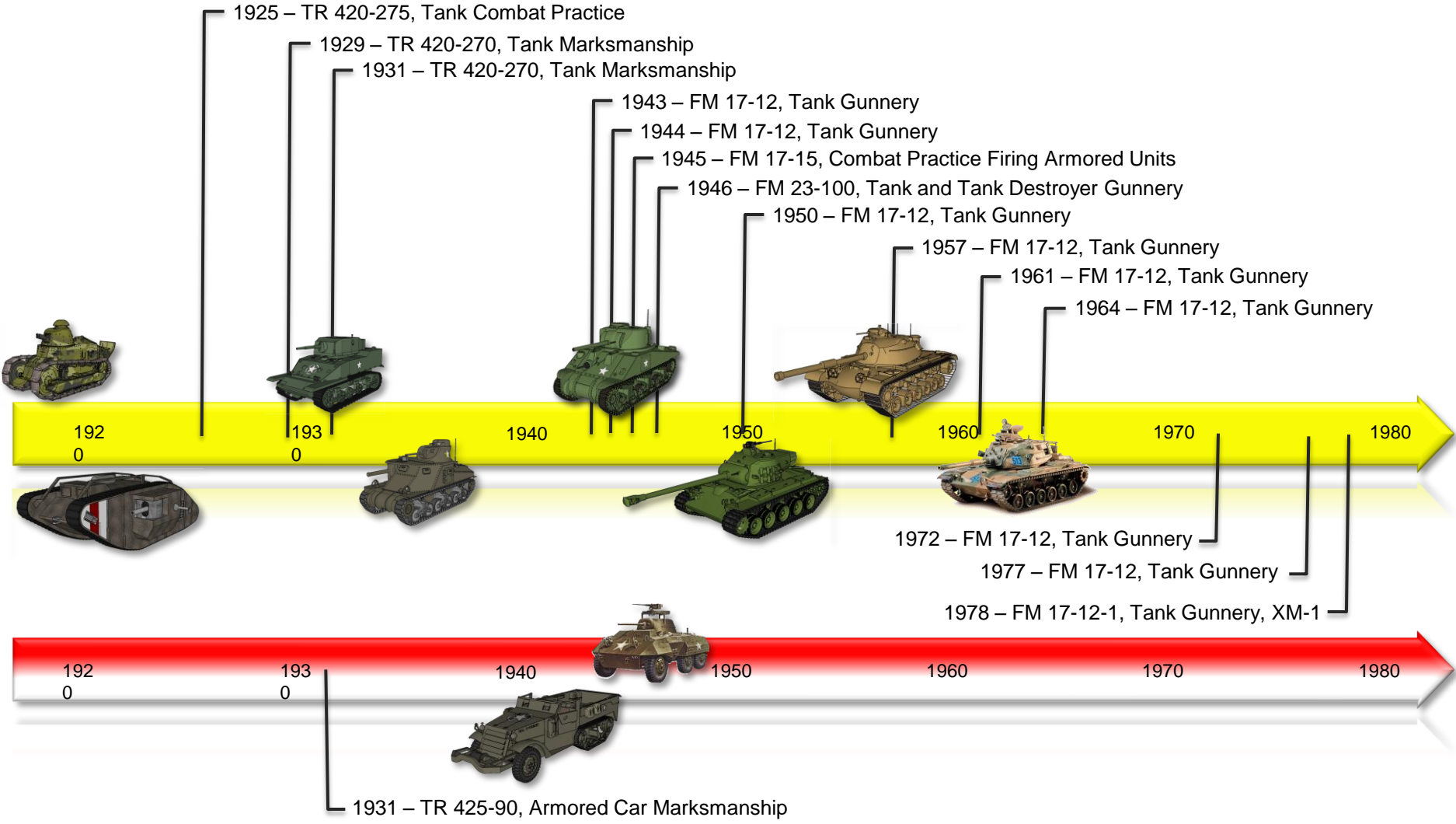
- Background
- Purpose
- Key Components
- Fire Command Updates
- Standard Table Sets
- Required Performance Measures
- Common Crew Score Card
- Threat Matrices Update
- Crew Penalties Updates



History of Gunnery 1920-1980



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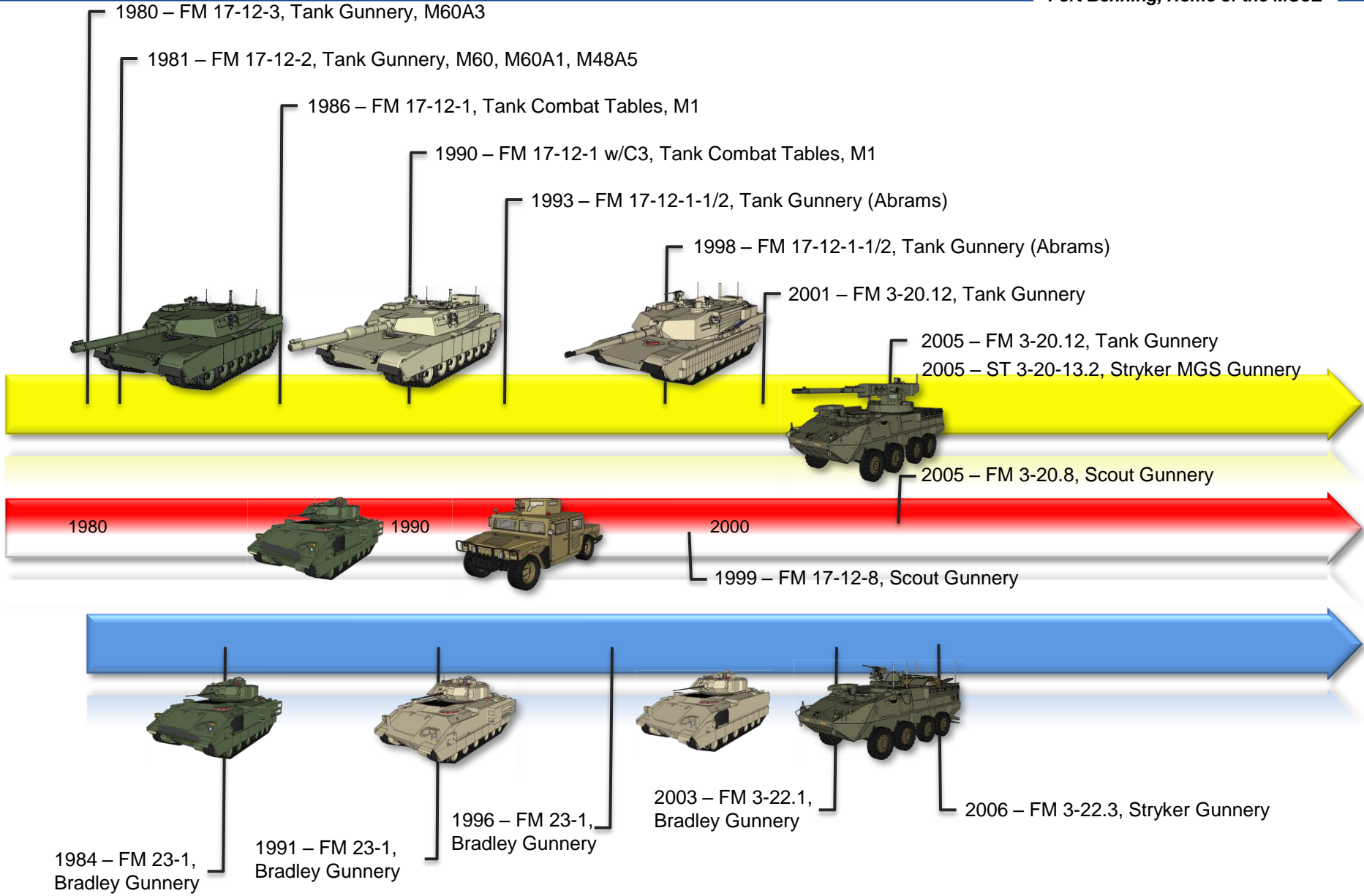




History of Gunnery, 1980 to 2009



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FM 3-20.21, HBCT Gunnery



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Guidance

CAC & TRADOC CDR
2005

Training Gap

“All Others” Unstabilized Gunnery
2007

Solution

FM 3-20.21, HBCT Gunnery
2009

Email, July 2005

“...impact of modularity on our training. One area of concern might be how we define our gunnery training and qualification in a modular BCT. *It seems to me that a common standard set might be useful in a modular organization to preclude confusion...utility in developing a single manual(s) for each unique BCT so we have a coherent set for the commander and staff to reference.*”

- The BCT Commander has not been provided an integrated strategy to train both maneuver and non-maneuver subordinate units as a combined arms team.
- The move from platform based training to organization based training to support the modular force.
- Other than MPs and Scouts, no tactical units with unstabilized weapon platforms were resourced in STRAC to actually train to shoot from that platform in combat scenarios.

- Single source, direct fire weapons gunnery manual for the HBCT
- **Common gunnery model** for all direct fire platforms within the BCT
- Increased **Commander's flexibility** during crew and collective training
- Enables, trains, and qualifies **mixed sections** and platoons Included Infantry Squad Live Fire Qualification
- Included Engineer Qualification Tables
- Combined Arms **Mixed Section**, Platoon and Company Live Fire events

CG CAC to Infantry / Armor Commandants

TRADOC Capabilities Needs
Assessment 13-17

Email, September 2008

“...We are excited about the manual in that addresses how the Army fights rather than a more sterile approach to gunnery resident in our old way of doing business” CG TRADOC (GEN Wallace) to GEN Casey & GEN Chiarelli



TC 3-20.1, Key Components



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- Updates to Fire Commands
- Standardized table sets
 - Stabilized
 - Unstabilized (including Stryker, RWS/CROWS equipped trucks)
- ATGM / TOW requirements
- Call-For Engagements
- Digital Engagement requirements
- Integrated Collective Exercises
- Readiness Exercises (Company / Troop and Battalion / Squadron)

Goal: Commonality across multiple platforms to reduce learning / training curve, improve standardization, and synchronize with the FORCEGEN cycle



Direct Fire Gunnery, TC 3-20.1



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- Standardizes ALL maneuver platform qualifications
- Enables crew, section, and platoon qualifications in ANY configuration the commander requires
- Enables single scenario (same range use) for ALL stabilized platforms
 - Abrams (all variants)
 - Bradley (all variants)
 - **Stryker MGS**
- Enables single scenario (same range use) for ALL unstabilized and RWS equipped platforms
 - Truck (Scout and other)
 - PC
 - Stryker (with and without RWS)



Direct Fire Gunnery, TC 3-20.1



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- Aligned with FORCEGEN Cycle (ARFORGEN)
- Synchronized with all other direct fire and mortar training strategies
- Defines Priority Levels of Qualification
 - Priority Level 1 (thru CALFEX / CLFX)
 - Priority Level 2 (thru Platoon Qualification)
 - Priority Level 3 (thru Section Qualification)
 - Priority Level 4 (thru Crew / Squad Qualification)

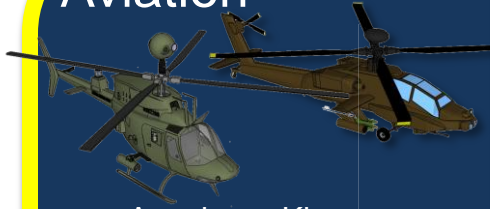


Section, Platoon, and CALFEX Events



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Aviation



Apache or Kiowa as available. Notional FM target handoff when assets unavailable.

Synchronized Tables across **collective** events maximizes the training value at the unit level. It requires Air-Ground Integration (CCA and UAS), Call For Fire, Call For Support, Call For MEDEVAC / CASEVAC events at multiple echelons.

Builds upon training in the Integrated Training Environment (ITE).



UAS

Shadow when available, Raven from organic assets.

Maneuver



BFIST / FO
And
FDC Included



Indirect

Ground CASEVAC with Battalion / Squadron organic assets.

MEDEVAC when assets coordinated and available.



MEDEVAC / CASEVAC



AC – A/S/I BCT FORCEGEN Cycle



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- Standardized first year, regardless of mission set
- Standardized second year for:
 - Mission Force
 - Rotational Allocated or Aligned (CEF)

Priority 1 – thru CALFEX
 Priority 2 – thru Platoon Qual
 Priority 3 – thru Section Qual
 Priority 4 – thru Crew / Squad Qual

Force	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mission Force					IN D	GUNNERY		1				IN D	GUNNERY		1			IN D	GUNNERY		1			
Rotation Allocated (DEF)					IN D	GUNNERY		1				DEPLOY												
Rotation or Aligned (CEF)					IN D	GUNNERY		1				IN D	GUNNERY		1			IN D	GUNNERY		1			

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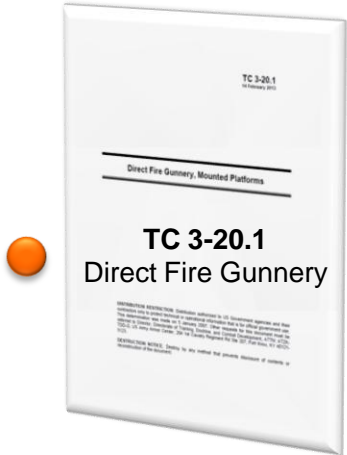


Direct Fire Gunnery (DFG) Document Structure



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User prints only what is needed.



Supporting Text
MGH 3-20.1.0X

Platform Specific Text
MGH 3-20.1.1X

Applied System Text
MGH 3-20.1.2X



- MGH 3-20.1-01 GST (ST 3.20.21-1)
- MGH 3-20.1-02 VCEEP (TC 3-20.21-2)
- MGH 3-20.1-03 TADSS
- MGH 3-20.1-04 DIDEA
- MGH 3-20.1-05 Ammunition
- MGH 3-20.1-06 MG Handbook
- MGH 3-20.1-11, M1A1
- MGH 3-20.1-12, M1A2
- MGH 3-20.1-13, Bradley A3
- MGH 3-20.1-14, Bradley ODS
- MGH 3-20.1-15, Stryker
- MGH 3-20.1-16, MGS
- MGH 3-20.1-17, ASV
- MGH 3-20.1-18, TOW
- MGH 3-20.1-21, CROWS / RWS
- MGH 3-20.1-22, ITASS
- MGH 3-20.1-23, TUSK
- MGH 3-20.1-24, BUSK

COMMON CREW GUNNERY SCORE SHEET

For use of this form use TC 3-20.1, the proponent agency is TRADOC.

1. ENG	2. PLATFORM / WEAPON	5a. VC:	c. DVR:	6. UNIT	7. BUMPER #
3. DATE	4. OWN VEHICLE POSTURE	b. GNR:	d. LDR:	8. VCE	

9. CONDITIONS OF THE TASK: (Check that apply) DAY NIGHT Short-Range Main Gun Long-Range Main Gun CBRN Vehicle Commander Short-Range Machine Gun Long-Range Machine Gun

[DEGRADED: Manual GAS/AUX LRF]

10. TARGET 1 (Most Dangerous)			11. TARGET 2 (Least Dangerous)			12. TARGET 3			13. TARGET 4		
a. TYPE	b. RANGE	c. POSTURE	a. TYPE	b. RANGE	c. POSTURE	a. TYPE	b. RANGE	c. POSTURE	a. TYPE	b. RANGE	c. POSTURE
d. AMMO TYPE	e. AUTHORIZED	f. EXPENDED	d. AMMO TYPE	e. AUTHORIZED	f. EXPENDED	d. AMMO TYPE	e. AUTHORIZED	f. EXPENDED	d. AMMO TYPE	e. AUTHORIZED	f. EXPENDED

DU - Driver Up	D - Doubtful	O - Over	T - Target	M - Malfunction	AC - AFT Cap	MF - Miss Fire	DD - Dust Down / Wind	OP - Open	TGT 1	TGT 3	TF - Thermal Fail
DB - Driver Back	L - Lost	S - Short	X - Termination	ST - Stoppage	BU - Breech Up	OB - Obscuration	Down	CL - Close	TGT 2	TGT 4	CF - Cease Fire

14. UP/FIRE 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75

DOWN

15. KILL 1	16. KILL 2	17. KILL 3	18. KILL 4	19. MALFUNCTIONS	20. PENALTY CODES / REMARKS	ENGAGEMENT CREW PENALTY INFORMATION				
a. TARGET #	a. TARGET #	a. TARGET #	a. TARGET #	a. BREECH UP (BU)		Note: DQ, AZ, and 30 - point penalties are assessed in block 21d. 5 - point penalties are assessed at the end of each Phase (Day or Night) on the Common Crew Gunnery Roll-Up using block 23c.				
b. CLOSE TIME	b. CLOSE TIME	b. CLOSE TIME	b. CLOSE TIME	b. AFT CAP (AC)		22. Number of Immediate Disqualification (DQ) penalties:	a.	23. ENG SCORE from block 21e:	a.	
c. DELAY / BREAK (-)	c. DELAY / BREAK (-)	c. DELAY / BREAK (-)	c. DELAY / BREAK (-)	c. MISFIRE (MF)		Number of Automatic Zeros (AZ) penalties:	b.	Total 5-point deductions (block 22d times 5 points):	b.	
d. DEFILADE (-)	d. DEFILADE (-)	d. DEFILADE (-)	d. DEFILADE (-)	d. STOPPAGE		Number of 30-pt. Safety penalties:	c.	Total Leader or Fundamental Crew Penalty Point deductions allowed at the end of the firing phase. (Lowest number of block 23a and 23b above):	c.	
e. ENG TIME (=)	e. ENG TIME (=)	e. ENG TIME (=)	e. ENG TIME (=)	e. THERMAL FAILURE		Number of 5-pt. penalties:	d.			
f. POINTS (+)	f. POINTS (+)	f. POINTS (+)	f. POINTS (+)	21a. TOTAL POINTS (=)	b. # of TARGETS (/)	c. BASE SCORE (=)	d. ENG PENALTIES (-)	e. ENG SCORE (=)	f. Did crew obtain 70 points per target? YES / NO	g. QUALIFIED ENG YES / NO



Commander Flexibility



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Commanders provide guidance to the scenario developer on the following when applying the Required Performance Measures (RPMs):

- Range to target
- Target type (based on weapon capability)
- Firing vehicle posture (offense, defense, short halt, traffic control point)
- Day / Night Mix
- CBRN Posture
- Call for Engagements
 - Call for Fire
 - Call for Support
 - Call for MEDEVAC



Gates To Live Fire



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Sequence of Live Fire and Gunnery:

- Table I – Gunnery Skills Test (within 90 days (AC) prior to Live Fire)
- Table II – Simulations and Simulations Gate To Live Fire (within 90 days (AC) prior to Live Fire)
- Table III – Crew Proficiency Course (Dry or Device Based first, within 30 days prior to Live Fire). Additional iterations may be fired live only after successful completion dry or device based.

Simulation Support:

- FKKY EST Facility – 2 ea Heavy Weapon Stations
- NGB VCOT, 2 ea Heavy Weapon Stations with turret ring mount
- NGB IGT C4.1, 7 ea Caliber .50, 1 ea MK19
- NGB UGT, 8 ea Caliber .50



Standardized Table Sets



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- Fundamental Tables (I – VI)
- Integrated Collective Exercises (VII – XII)
- Readiness Exercises (XIII – XVIII)
 - Proposed Only – In coordination with FORSCOM

Applies to:

- Individual Weapons (MCoE proponent)
- Platforms (MCoE proponent)
 - Stabilized
 - Unstabilized
- Mortar (MCoE proponent)
- Aviation



Tables I – VI



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Fundamental Tables

Table	Name	Remarks
I	GST – Gunnery Skills Test PI&E – Primary Instruction & Evaluation	Gate To Live Fire
II	Simulations or Gaming Gate To Live Fire	Gate To Live Fire
III	Proficiency Course	Dry / Device Based Gate To Live Fire
IV	Basic Table	Live
V	Practice	Live
VI	Qualification	Live Gate To Integrated Collective Exercises



Tables VII – XII



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Integrated Collective Exercises

Table	Name	Remarks
VII	Section Simulations, Gaming and Lanes	<i>Gate To Section Live Fire</i>
VIII	Section Practice	LVC-G
IX	Section Qualification	<i>Gate To Platoon</i>
X	Platoon Simulations, Gaming, and Lanes	LVC-G
XI	Platoon Practice	Device Based
XII	Platoon Qualification	<i>Gate To Company Collective</i>



Tables XIII – XVIII



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Readiness Exercises

Table	Name	Remarks
XIII	Company Simulations, Gaming, and STX Lanes	Gate To T1
XIV	CALFEX / CLFX	Gate To T1
XV	Battalion Fire Coordination Exercise (FCX)	Gate To T1
XVI	Defend	Home Station (Maneuver) or CTC (Fire and Maneuver)
XVII	Movement to Contact	
XVIII	Attack	Welcome to T1

Proposed – In coordination with FORSCOM



Examples



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ABCT Individual Live Fire

Individual Weapons

- **Table I**
- **Table II**
- **Table III**
- Table IV
- Table V
- **Table VI**

ABCT Gunnery Density

Squads and Crews

- **Table I**
- **Table II**
- **Table III**
- Table IV
- Table V
- **Table VI**

Integrated Collective Exercises

Sections

- **Table VII**
- Table VIII
- **Table IX**

Platoon

- **Table X**
- Table XI
- **Table XII**

Readiness Exercises

Company

- Table XIII
- **Table XIV**

Battalion

- Table XV
- **Table XVI**
- **Table XVII**
- **Table XVIII**

Gates
Qualification



Proficiency Indicators



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- Must make sense
- Training calculus minimized as much as possible
- Must work with Progressive Readiness Model
- Must be standardized across type of system
- Must include the missing qualifications
 - Gates To = Requirement
 - Qualification = Requirement
 - All Else = Essential



Proposed Trained (T) Proficiency Indicators



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Individual: Individual and Squad Weapons Qualification Proficiency (AC = every **9 months**, RC = **every 18 months**)

- Be qualified on Table VI prior to executing any collective live-fire event within the last **three months (both AC and RC)**. No Soldier may execute collective live-fire events without successfully completing individual weapon's qualification within the last three months.
- Units are T by maintaining **85%** qualification standards every nine (9) months AC and eighteen (18) months RC.

Vehicle Commander: (VC as an **Individual**)

Gunner: (Gunner as an **Individual**)

(AC = every **9 months**, RC = **every 18 months**)

- Be qualified on Table VI within the last nine months. Allows the commander to place a qualified Vehicle Commander with a different qualified Gunner and maintain a qualified crew through the next Gunnery rotation. Reduces qualified crew turbulence due to promotion, duty position change, PCS, ETS, etc.

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Proposed Trained (T) Proficiency Indicators



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Crew:

(AC = every **9 months**, RC = every **18 months**)

- Crews **will** conduct the CPC every nine months (both AC and RC) using laser-based devices or dry fire. Upon successful completion using devices or dry, units may fire using inbore devices and sub-caliber ammunition as available. The crews **must** successfully pass Table III within one month (both AC and RC) prior to conducting any live-fire event.
- Crews must qualify on Table VI, Crew Qualification, every **nine (9) months (AC) or eighteen (18) months (RC)**.
- A qualified crew is a Vehicle Commander and Gunner combination that successfully completes Table VI as outlined in TC 3-20.1, Direct Fire Gunnery. Battalions are to maintain a minimum of **85%** of stabilized crews qualified on Table VI **at Aim Point 2 of the Progressive Readiness Model**.

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Proposed Trained (T) Proficiency Indicators



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Section: Commanders determine the composition of the section.
(AC = every **9 months**, RC = post mobilization)

- Be qualified on Table VI prior to executing any collective live-fire event within the last **three months (both AC and RC)**.
- A qualified section is a Section Leader (Sergeant) that successfully completes Table IX with a minimum of two platforms or elements, including the tactical maneuver tasks selected by the commander within the **last nine (9) months**. Units must maintain **70%** of sections qualified **after Aim Point 2 of the Progressive Readiness Model**.

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Proposed Trained (T) Proficiency Indicators



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Platoon: Commanders determine the composition of the platoon.

(AC = every **9 months**, RC = post mobilization)

- Be qualified on Table VI prior to executing any collective live-fire event within the last **three months (both AC and RC)**.
- A qualified platoon is a Platoon Leader and Platoon Sergeant that successfully completes Table XII, including the tactical maneuver tasks selected by the commander within the **last nine (9) months**. Units must maintain **70%** of **all assigned MANEUVER** platoons qualified at **Aim Point 2 of the Progressive Readiness Model**.

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Proposed Trained (T) Proficiency Indicators



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Company / Troop: Commanders determine the composition of the company / troop.
(AC = every **9 months**, RC = post mobilization)

- A qualified Company / Troop is a Commander and **66%** of his qualified platoons (Table XII) successfully executing a Combined Arms Live Fire Exercise (CALFEX) / Collective Live Fire Exercise (CLFX) within the last **nine (9)** months (AC).

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Questions?

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