

*STAR FLEET*  
*STARSHIP WEAPONRY*  
*GUIDE 2268*

## FOREWORD

TO BE HONEST, WHEN I FIRST PUT THIS TOGETHER, IT WAS REALLY JUST A BUNCH OF NOTES FOR MY OWN REFERENCE ABOUT *STAR TREK'S* WEAPONS SYSTEMS. IT WASN'T REALLY THAT COHERENT, AND SERVED JUST AS A QUICK REFERENCE FOR TIDBITS ABOUT WHAT WEAPONS WENT ON WHICH SHIPS, WHEN THEY CAME ABOUT, WHAT THEY COULD DO, AND SO ON.

AFTER THE *SHIPS OF THE LINE* GUIDE WAS COMPLETE, IT WAS PRETTY PLAIN THAT THERE REALLY WASN'T A DEFINITIVE GUIDE ON *STAR TREK'S* DOCUMENTED WEAPONRY OUT THERE. NOT EVEN THE SEEMINGLY ALL-INCLUSIVE *STAR TREK TECHNICAL MANUAL* GAVE INFORMATION ABOUT PHASERS, PHOTON TORPEDOES, AND THEIR ILK.

I DECIDED, BASICALLY, TO JUST COMPILE ALL THE INFORMATION I HAD SCRIBBED DOWN MORE NEATLY AND OFFER IT UP FOR PEOPLE'S ENJOYMENT. IT'S HARDER TO PIN DOWN 'CANON' AND 'OFFICIAL' SOURCES WITH THIS GUIDE, SINCE TECHNICAL DETAILS AT THIS LEVEL WERE OFTEN GLOSSED OVER, BUT I DID THE BEST I COULD! HOPEFULLY IT CAN BE OF USE TO OTHER *STAR TREK* FANS.

NEALE DAVIDSON, FEB 2005

## DESIGN CREDITS

THOUGH SPECIFIC DESIGN CREDITS FOR THIS GUIDE ARE NOT POSSIBLE, THE AUTHOR WOULD LIKE TO THANK MATTHEW JENNINGS, FRANZ JOSEPH, AND RICK STERNBACH PROFUSELY FOR THEIR ATTENTION TO TECHNICAL DETAIL. WITHOUT THEIR WORK, THIS GUIDE COULD NOT HAVE BEEN POSSIBLE.

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## INTRODUCTION

STARSHIPS ARE POWERFUL INSTRUMENTS OF THE FEDERATION'S MILITARY MIGHT. TO KNOW WHAT THEY'RE CAPABLE OF, A CREWMEN MUST FAMILIARIZE HIMSELF WITH THE CAPABILITIES OF THEIR WEAPONRY. PHOTON TORPEDOES, PHASERS, AND OTHER WEAPONS EACH HAVE VARIOUS STRENGTHS AND WEAKNESSES AND SHOULD BE USED IN DIFFERENT TACTICAL SITUATIONS.

THIS GUIDE SERVES AS ONLY A BRIEF SUMMARY OF THE WEAPONS SYSTEMS FOUND ON CURRENT STARSHIPS, SUCH AS THE *U.S.S. ENTERPRISE*, AND PROVIDES A BRIEF RUN-DOWN ON CAPABILITIES FOR EACH TYPE. SPECIFIC INFORMATION, OF COURSE, IS CLASSIFIED AND BEYOND THE SCOPE OF THIS REFERENCE GUIDE.

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## BEAM EMITTER SYSTEMS

### OVERVIEW

#### DESCRIPTION

BEAM EMITTERS REPRESENT THE SHORT RANGE 'GUNS' OF A STARSHIP. THEY TEND TO BE SHORT RANGE, AND RELATIVELY LOW YIELD WHEN COMPARED TO HEAVY WEAPONS SUCH AS PHOTON TORPEDOES OR GRAVITIC MINES.

WHILE LASERS AND PHASERS BEHAVE SOMEWHAT DIFFERENTLY, THE GENERAL CONCEPTS REMAIN THE SAME. POWER IS CHanneLED THROUGH A CRYSTAL FOCUS THE GENERATES AN INTENSE ENERGY BEAM. THE HEAT AND POWER OF THE BEAM CAUSES A HIGH YIELD DESTRUCTIVE FORCE AT ITS TARGET.

THOUGH BEAM EMITTERS ARE POTENT OFFENSIVE AND POINT-DEFENSIVE WEAPONS, THEY HAVE LIMITATIONS. SINCE EMITTERS FIRE OFF REGULAR BURSTS OF ENERGY, THEY ARE THEORETICALLY LIMITED TO THE SPEED OF LIGHT (THOUGH, IN PRACTICE, THEY ARE SLOWER). THIS MEANS THAT BEAM EMITTERS ARE VERY IMPRACTICAL AT WARP SPEEDS, BECAUSE BOTH THE FIRING AND TARGET SHIPS TRAVEL ARE TRAVELING FASTER THAN THE BEAMS ARE CAPABLE OF!

BEAM EMITTERS USE THE FIRING'S SHIPS TARGETING COMPUTERS FOR TARGET ACQUISITION. IN MOST CIRCUMSTANCES, THEY ARE CONSIDERED 'DUMB' WEAPONS, FIRING IN A STRAIGHT LINE FROM WHERE THEY ARE AIMED. TO THEIR TARGET. A SHIP'S SENSOR SYSTEMS WILL ALSO ALLOW BEAM EMITTERS TO ACQUIRE A 'TARGET LOCK', WHICH WILL KEEP A SPECIFIC TARGET TRACKED WHILE THE PHASERS ARE FIRED.

UP TO THE 2260S, BEAM EMITTERS HAVE BEEN POWERED THROUGH THE SHIP'S IMPULSE ENGINES. EACH EMITTER MAINTAINS A 'STANDBY CHARGE' AS WELL, ONCE ARMED, ALLOWING POWER TO BE STORED WITHIN THE WEAPON HOUSING ITSELF IN CASE THE IMPULSE ENGINE IS DAMAGED IN BATTLE.

#### HISTORY

BEAM TECHNOLOGY, AS FAR AS EARTH GOES, HAS BEEN AROUND SINCE THE 20TH CENTURY. IT WAS FIRST WEAPONIZED, THOUGH WITH VERY LOW YIELD, IN THE 1980S TO ACT AS POINT-DEFENSE SYSTEM AGAINST MISSILE STRIKES. THOUGH THE THEORY WAS SOUND, TECHNOLOGIC PROGRESS WOULD NOT MAKE THE FIRST VIABLE LASER WEAPON UNTIL THE BEGINNING OF THE 21ST CENTURY.

BEAM EMITTERS AS STARSHIP WEAPONRY STARTED WITH THE FIRST NX EXPERIEMENTS ABOARD THE NX-01 *ENTERPRISE*, AND WITH OTHER SHIPS CONSTRUCTED AT THE TIME. THESE 'MK I PHASE LASERS' USED A HIGH-POWER BUT LOW YIELD BEAM WEAPON. IRONICALLY, THOUGH THE MK I PHASE LASERS HAD THE RIGHT THEORY IN MIND, THE IMPLEMENTATION WAS FLAWED AND THE TECHNOLOGY STALLED WHILE THE NEEDS OF THE ROMULAN WAR FORCED A MORE CONVENTIONAL APPROACH.

THE MK II THROUGH MK VI LASER EMITTERS SERVED EARTH FLEET THROUGH SEVERAL GENERATIONS, WITH EACH EMITTER BECOMING MORE EFFICIENT AND MORE POWERFUL IN TURN. LASER TECHNOLOGY CULMINATED WITH THE MK VII DESIGN, A POWERFUL LASER CANNON WHICH FINALLY PUT EARTH'S VESSELS ON PAR WITH ITS NEIGHBORS BOTH FRIEND OR FOE.

IN 2248, HOWEVER, A NEW TECHNOLOGY WAS FINALLY UNVEILED WHICH RENDERED THE LASER CANNON HIGH OBSOLETE. THE PHASER, WHICH MADE USE OF DIFFERENT BANDS OF ENERGY AND RADIATION, PACKED DRAMTICALLY MORE PUNCH AND HAD MORE CAPABILITY THAN ANY LASER COULD MANAGE WITH ANY DEGREE OF PRACTICALITY.

BETTER STILL, THOUGH THE PHASER REQUIRED A NEW HOUSING DESIGN (THE FH-3), IT DIDN'T REQUIRE MUCH WORK TO REPLACE THE OLDER LASER CANNONS WITH THE NEW SYSTEMS. WITHIN ONLY A FEW YEARS, THE COMBAT EFFECTIVENESS OF UESPA SHIPS ROSE TO THE FOREFRONT, LARGELY SECURING EARTH'S STARFLEET AS THE LEADING FORCE FOR THE FEDERATION'S MILITARY ARM.

IN 2253, A REFINED VERSION OF THE PHASER DESIGN WAS PUT INTO PRODUCTION WHICH REDUCED POWER REQUIREMENTS WHILE marginALLY IMPROVING PERFORMANCE. IT HIS THIS CURRENT MK IX DESIGN THAT REMAINS THE STANDARD BEAM EMITTER FOR FEDERATION SHIPS OF THE LINE.

#### EDITOR'S ANNOTATIONS

PHASERS ARE THE ONLY WEAPONS WHICH APPEAR IN THE STAR TREK WRITER'S BIBLE, AND ARE THE ONLY WEAPONS THE ENTERPRISE HAS IN MOST OF THE SHOW'S FIRST SEASON. ORIGINALLY, PHASERS WERE DESIGNED LIKE 'ANTI-AIR' ARTILLERY, WHICH FEATURED EXPLODING SHELLS WHICH COULD HAVE A VARIETY OF EFFECTS.

WITHIN THE FIRST SEASON, HOWEVER, THE WRITERS AND STAFF SOLIDIFIED THE ROLE OF THE PHASER WAS THE SHIP'S MAIN 'BEAM WEAPON', ELIMINATING SHELLS OUTRIGHT, AND MOVING A LOT OF THE EXTRA ABILITIES OF THE WEAPON OVER TO THE PHOTON TORPEDO.

SO, THE 'BALANCE OF TERROR' EFFECTS SHOTS SHOWING WHAT APPEAR TO BE PHOTON TORPEDOES INSTEAD OF PHASERS ARE ACTUALLY SHOWING THE LATER RET-CONNED PHASER CAPABILITIES. IT'S PROBABLY EASIER TO ASSUME, IN TERMS OF THE *STAR TREK* UNIVERSE THAT KIRK *REALLY* HAD ORDERED TORPEDOES INSTEAD, AND HOLLYWOOD'S INTERPRETATION JUST SCREWED UP.

## BEAM EMITTER – MARK VII

OFFENSIVE/POINT-DEFENSE WEAPONRY SYSTEM

### SYSTEM DESIGNATION:

LASER CANNON BEAM EMITTER, MK VII

### SYSTEM FEED:

FH-2 HOUSING, IMPULSE POWER CHANNEL

SYSTEM COMMISSION: 2238

YIELD (APPROX MAX): 1.8MT

RANGE (APPROX MAX EFFECTIVE): 125,000KM

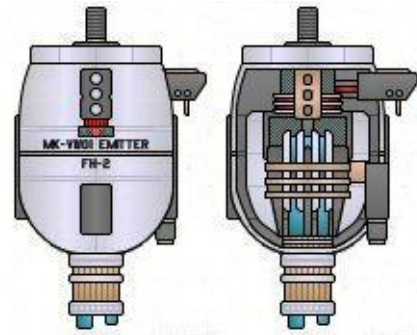
### DIMENSIONS:

LENGTH: 2.2M

BREADTH: 1.2M

HEIGHT: 1.2M

MASS (DEADWEIGHT): 645KG



### GENERAL INFORMATION

THE MK VII LASER CANNON IS THE CULMINATION OF LIGHT-WAVE OFFENSIVE TECHNOLOGY. THE UNIT WAS THE MAIN BEAM WEAPON OF THE *BATON ROUGE* ERA AND LASTED ON THROUGH THE EARLY YEARS OF *CONSITUION* CLASS DOMINATION. EVEN TODAY, A NUMBER OF AUXILLARY AND NON-COMBANTANT FEDERATION VESSELS MAKE USE OF THE MK VII SYSTEM.

THE LASER SYSTEM, FOR ITS TIME, WAS ON PAR TO MOST THREAT SHIPS, BUT WAS SHOWING SERIOUS PROBLEMS IN EFFICIENCY AS EARLY AS 2240. MOST TROUBLING WAS THAT THE POWER OF THE WEAPON WAS INSUFFICIENT TO CAUSE NOTICEABLE SHIELD DRAIN IN THE NEW KLINGON D-7 BATTLECRUISERS. SUCH A LIABILITY COULD NOT BE AFFORDED FOR VERY LONG.

AN ADDITIONAL 'WEAKNESS' FOR THE LASER WAS THAT ITS COHESION WOULD BREAK DOWN OVER RANGE, STARTING AT THE BEAM INCEPTION. THE FARTHER THE RANGE, THE LESS YIELD THE LASER COULD DELIVER. ADJUSTMENT ATTEMPTS TO ALLOW A YIELD/RANGE CURVE DELIVERED ONLY LIMITED SUCCESS.

LASTLY, UNLIKE PHASERS WHICH CAN BE HEAVILY FINESSED IN YIELD AND EVEN DELIVERY FORCE, LASERS ARE MUCH MORE COARSE. THE FIXED WAVELENGTHS ALSO ELIMINATE ANY POSSIBILITY OF A 'STUN' EFFECT.

THOUGH STILL IN LIMITED SERVICE, THE MK VII LASER CANNON IS CONSIDERED OBSOLETE. IT SHOULD BE NOTED, HOWEVER, THAT 'SCRAPED' MK VII SYSTEMS HAVE FALLEN INTO THE HANDS OF ORION PIRATES AND OTHER 'MINOR POWER' GROUPS, AND THESE WEAPONS, AND THOSE BUILT FROM THEIR DESIGNS, CAN STILL POSE A THREAT TO FEDERATION CRAFT.

### EDITOR'S ANNOTATIONS

IN *STAR TREK*'S ORIGINAL PILOT, CAPTAIN PIKE IS SHOWN TO BE USING A 'PHASER PISTOL', AND 'PHASER' HAD NOT BEEN INVENTED YET. EVEN IN THE REGULAR SERIES EPISODE "THE MAN TRAP", THE OLDER LASER PISTOL SEEMED TO BE IN COMMON USE, INDICTING THAT PHASERS WERE A RELATIVELY NEW BREAKTHROUGH IN SHIP WEAPONRY.

THE SYSTEM GIVEN HERE IS LARGELY CONJECTURE, BASED ON THE IDEA THAT THE *ENTERPRISE* HERSELF WOULDN'T YET HAVE PHASERS EITHER, FOR SOME PERIOD, THOUGH WOULD HAVE A MORE 'PRIMITIVE' LASER CANNON EMPLACEMENT WHERE THE PHASERS OF KIRK'S ERA WOULD EVENTUALLY BE.

## BEAM EMITTER – MARK VIII

OFFENSIVE/POINT-DEFENSE WEAPONRY SYSTEM

### SYSTEM DESIGNATION:

PHASER BEAM EMITTER, MK VIII

### SYSTEM FEED:

FH-3 HOUSING, IMPULSE POWER CHANNEL

SYSTEM COMMISSION: 2248

YIELD (APPROX MAX): 3.0MT

RANGE (APPROX MAX EFFECTIVE): 225,000KM

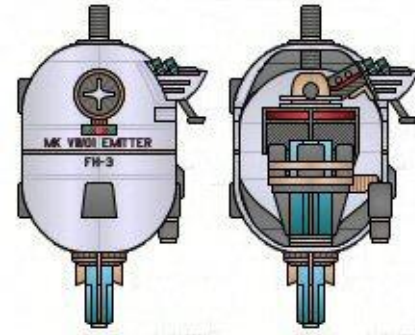
### DIMENSIONS:

LENGTH: 2.2M

BREADTH: 1.2M

HEIGHT: 1.2M

MASS (DEADWEIGHT): 895KG



### GENERAL INFORMATION

THOUGH EARTH'S FLEET HAD GAINED IN PROMINENCE WITH THE *BATON ROUGE* CLASS'S OVERALL EFFECTIVENESS, IT WAS CLEAR THAT EARTH'S WEAPONRY HAD FALLEN SIGNIFICANTLY BEHIND OTHER POWERS. THE VENERABLE ADVANCED LASER SYSTEMS WHICH HAD CULMINATED IN THE IMPRESSIVE FH-2 HOUSING AND MK VII EMITTER, WOULD NOT REMAIN EFFECTIVE FOR MUCH LONGER AS SHIELD TECHNOLOGY CONTINUED TO IMPROVE.

THE PHASER, SUCCESSFULLY TESTED IN 2245 AND INTRODUCED ON THE *USS CONSTITUTION* IN 2248, REPRESENTED A DRAMATIC LEAP IN BEAM WEAPON TECHNOLOGY. THE PHASER, SHORT FOR 'PHASED ENERGY RECTIFICATION', ALLOWED FOR A HEAVY ENERGY PARTICLE THAN TYPICAL LASERS, INCREASING THE RANGE AND YIELD OF THE BEAM WEAPON, THOUGH AT A COST OF THE BEAM'S DELIVERY SPEED AS OPPOSED TO FOCUSED LIGHT ENERGY.

THE PHASER SYSTEM PROVED SO SUCCESSFUL THAT THE VENERABLE MK VII LASER CANNON WAS DECLARED IMMEDIATELY 'OUTDATED' AND ALL FEDERATION 'LINE' VESSELS WERE REFIT WITH THE NEW SYSTEMS WITH EACH OVERHAUL AND MAINTENANCE SCHEDULE. AS EARLY AS 2250, NEARLY ALL OF THE EARTH'S FLEET HAD BEEN REFIT WITH THE NEW WEAPON, AND MUCH OF THE OTHER FEDERATION WORLD'S FLEETS HAD BEGUN UPGRADING AS WELL.

THE PHASER'S DRAWBACK, OF COURSE, IS THAT IT IS NOT A FTL DELIVERY SYSTEM, MEANING THAT THE WEAPON IS PRACTICALLY, BUT NOT COMPLETELY, USELESS AT WARP SPEEDS. ALSO, TACTICALLY, LIKE LASER CANNONS, A PHASER IS NOT DESIGNED TO CRACK AN ENEMY'S SHIELD WITH A SINGLE HIT, BUT INSTEAD DRAIN THEM BIT-BY-BIT WITH SUSTAINED FIRE.

REFINEMENTS IN THE MK VIII SYSTEM WOULD RESULT IN THE NOW-STANDARD MK IX PHASER EMITTER, USING THE SAME FH-3 HOUSING SYSTEM. THE MK VIII IS NOW TECHNICALLY OUTDATED, BUT COMMONLY FOUND ON FEDERATION STARSHIPS.

### EDITOR'S ANNOTATIONS

THE PHASER SHOWN HERE IS REALLY JUST MEANT TO BE A 'BETWEEN' DESIGN FROM PIKE'S LASER CANNONS AND KIRK'S SHIP'S PHASERS INSTALLED 13 YEARS LATER. AS A RESULT, THIS IS THE 'NEW' PHASER THAT REPRESENTED SUCH A MAJOR WEAPON'S UPGRADE, WITH KIRK'S MK IX PHASER BEING A REFINED VERSION OF THIS MORE 'CRUDE' ONE.

THE IMAGE OF THE PHASER IS BASED ON THE MK IX, THOUGH DELIBERATELY MADE A LITTLE MORE CRUDE AND PRIMITIVE, IN CERTAIN AREAS, SUCH AS THE BARREL AND CRYSTAL FOCUS SYSTEM.

## BEAM EMITTER – MARK IX

OFFENSIVE/POINT-DEFENSE WEAPONRY SYSTEM

### SYSTEM DESIGNATION:

PHASER BEAM EMITTER, MK IX

### SYSTEM FEED:

FH-3 HOUSING, IMPULSE POWER CHANNEL

SYSTEM COMMISSION: 2253

YIELD (APPROX MAX): 3.2MT

RANGE (APPROX MAX EFFECTIVE): 250,000KM

### DIMENSIONS:

LENGTH: 2.2M

BREADTH: 1.2M

HEIGHT: 1.2M

MASS (DEADWEIGHT): 855KG

### GENERAL INFORMATION

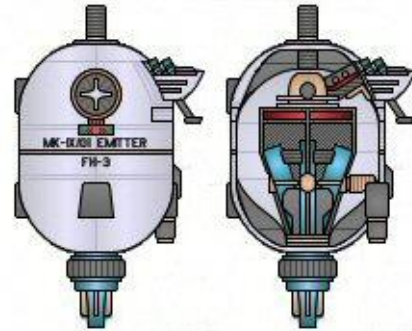
THE MARK IX BEAM EMITTER IS THE SECOND CLASS OF PHASER WEAPON TO BE USED ON STARSHIPS, SERVING AS THEIR MAIN POINT-DEFENSE AND SHORT-RANGE WEAPON SYSTEM. THE SYSTEM IS CURRENTLY THE STANDARD PHASER WEAPON ABOARD MOST FEDERATION LINE VESSELS.

THE MARK IX, STILL USING THE FH-3 HOUSING SYSTEM, ISN'T A DRAMATIC IMPROVEMENT OVER THE PREVIOUS VERSION IN TERMS OF YIELD, BUT IS IN TERMS OF ITS EFFICIENCY, REQUIRING A 20 PERCENT LESS DRAIN ON THE VESSELS IMPULSE DRIVE THAN WITH THE PREVIOUS ARRANGEMENT. THE FOCUSED BEAM ALSO INCREASES THE MAXIMUM RANGE SUBSTANTIALLY,

LIKE THE MK VIII, THE MK IX CAN BE SET FOR A MAXIMIZED YIELD CURVE AT VARIOUS RANGES, ALLOWING FOR THE MOST EFFECTIVE PUNCH AGAINST AN ENEMY WHILE MAINTAINING A HIGHER LEVEL OF POWER EFFICIENCY. AGAIN, THE IMPROVEMENTS FOR THIS VERSION OF THE PHASER EXTEND THIS 'YIELD ADJUSTABLE RANGE' SOMEWHAT, AS WELL AS A SLIGHT BOOST TO THE POTENTIAL YIELD DELIVERED.

THOUGH THE MK IX IS THE PREFERRED PHASER SYSTEM FOR FEDERATION SHIPS, IT DOES NOT REPRESENT THE 'QUANTUM LEAP' OF TECHNOLOGY THAT THE ORIGINAL MK VIII DID OVER LASER CANNONS. BECAUSE OF THIS, THE ADOPTION PERIOD FOR THE NEWER SYSTEM HAS BEEN A LOT SLOWER, AND A NUMBER OF 'SECONDARY' SHIP CLASSES HAVE NOT BEEN UPGRADED AT ALL.

THE PLANNED MK X DESIGN, MAKING USE OF POWER FROM THE WARP ENGINES INSTEAD OF THE IMPULSE DRIVE, IS CURRENTLY UNDER TRIALS AND IS EXPECTED TO PHASE OUT BOTH THE MK VIII AND MK IX PHASER SYSTEMS IN THE 2270'S.



### EDITOR'S ANNOTATIONS

PHASERS ARE THE SECOND WEAPON OF THE *STAR TREK* SERIES (REPLACING LASERS), BUT THE ONLY ONE MENTIONED WITHIN THE WRITER'S BIBLE. FOR THE ORIGINAL SERIES, THE PHASERS WERE FAIRLY 'MAGICAL', BEING MORE LIKE ANTI-AIR ARTILLERY SHELLS THAN THE BEAM WEAPONS THAT THEY WOULD EVOLVE INTO BY *STAR TREK*'S SECOND SEASON.

THE PHASER DIAGRAM HERE IS BASED ON THE ONLY 'CANON' REFERENCE TO WHAT A PHASER EMITTER LOOKS LIKE IN THE ORIGINAL SERIES. IN THE EPISODE "THE TROUBLE WITH TRIBBLES", SCOTTY IS LOOKING AT A DIAGRAM CLEARLY MARKED AS A 'PHASER' FOR *CONSTITUTION CLASS* STARSHIPS.

ACCORDING TO SOME SOURCES, THE DIAGRAM WAS JUST A QUICK SWIPE OF A MAINTENANCE DIAGRAM FROM ONE OF DESILU'S WATER HEADER SYSTEMS. OTHER SOURCES CLAIM THAT THE DIAGRAM IS ANYTHING FROM A B-52 CYCLING FUEL TANK, TO A COOLANT SYSTEM FOR JET ENGINES. OF COURSE, THE END RESULT WAS THAT THE DIAGRAM WASN'T REALLY *SUPPOSED* TO BE WHAT A PHASER LOOKED LIKE. AT THE TIME, NO ONE THOUGHT ANYONE WOULD BE REFERENCING THE LITTLE TECH DETAILS IN EACH EPISODE LIKE THAT.

THIS DRAWING ACTUALLY DOES USE THAT 'WATER HEATER OF DEATH' DIAGRAM AS ITS BASE, BUT REDOES THE DETAILS TO BE MORE IN KEEPING WITH OTHER *STAR TREK* GEAR AND LOOK A LITTLE MORE LIKE A PHASER. THE 'EMITTER', FOR INSTANCE, IS BASED ON THE PHASER PISTOL'S 'BARREL' SHOWN IN THE SERIES.

THE YIELD OF THE PHASER IS DEDUCED BY GOING ON THE OFFICIAL, IF LACKING, '5.1MW' TERM GIVEN OUT BY PARAMOUNT FOR THE POWER OF A SHIP'S PHASER. THE MEGATON YIELD GIVEN HERE IS BASED ON THE SHIP'S PHASER SUSTAINING IT'S MAXIMUM POWER POTENTIAL FOR ONE HALF OF ONE SECOND, ABOUT THE LENGTH OF TIME WE SEE A PHASER FIRING IN THE ORIGINAL SERIES.



# PHOTON TORPEDO SYSTEMS

## OVERVIEW

### DESCRIPTION

A PHOTON TORPEDO IS A PROJECTILE WEAPON THAT IS THE MAINSTAY OF THE FEDERATION'S HEAVIER ARSENALS. THE CURRENT STANDARD, THE MK III, CAN BE FOUND ON MOST OF STARFLEET'S SHIPS AND STARBASES.

THE TORPEDO UTILIZES A WARHEAD OF MATTER AND ANTIMATTER, AROUND A SINGLE KILOGRAM EACH OF DEUTERIUM (HEAVY HYDROGEN) AND ANTI-DEUTERIUM. BOTH ELEMENTS ARE KEPT IN A SMALL FORCE-FIELD ENFORCED CONTAINER EACH, AND THEN CHanneLED THROUGH A CONDUIT TO BOTH PROVIDE POWER FOR THE TORPEDO ITSELF, AS WELL AS DELIVER ITS DESTRUCTIVE PUNCH.

A TORPEDO CAN BE USED AT WARP BY 'PRIMING' THE TORPEDO'S WARP SUSTAINING ENGINE WITH THE WARP FIELD OF THE FIRING SHIP, OR WITH A WARP-BATTERY FROM STARBASE. THIS GIVES EACH TORPEDO A DRAMATICALLY LONG EFFECTIVE RANGE WHEN COMPARED TO OTHER STARSHIP WEAPONS.

PHOTON TORPEDOES ARE ALSO 'GUIDED', AND CAN TRACK THE ENERGY SIGNATURES OF POTENTIAL TARGETS WITH THEIR ON-BOARD SENSOR SYSTEMS. THEY CAN ALSO BE PROGRAMMED BY THE FIRING VESSEL TO FOLLOW SPECIFIC PATHS, EXPLODE AS A 'DIRECT FIRE' WEAPON, OR AS A 'PROXIMITY' WEAPON, OR SELF-DESTRUCT IN FLIGHT.

### HISTORY

THE PHOTON TORPEDO CONCEPT IS ACTUALLY QUITE OLD, ORIGINATING WITHIN EARTH'S 'NX' PROGRAM IN 2151. AT THE TIME, THE TORPEDO (CALLED 'PHOTONIC TORPEDO') PROVED PROMISING BUT EXPENSIVE AND UNSTABLE. THE ROMULAN WAR WOULDN'T ALLOW FOR MASS DEPLOYMENT OF THE NEW TECHNOLOGY AND THE PROGRAM WAS RELUCTANTLY PUSHED BACK IN FAVOR OF THE CHEAPER AND MORE RELIABLE NUCLEAR SPATIAL TORPEDOES OF THE AGE.

IN 2190, EARTH AGAIN LOOKED AT THE PHOTON TORPEDO TECHNOLOGY AS PART OF ITS 'MILITARY UPGRADE' POLICY IN LIGHT OF HOSTILITIES EMERGING WITH THE KLINGON EMPIRE. THE INITIAL MK I TORPEDO WAS MET WITH HARSH CRITICISM DUE TO INSTABILITY PROBLEMS AS WELL AS FLAKEY RELIABILITY, BUT WAS DEEMED NECESSARY IN LIGHT OF SUPERIOR KLINGON WEAPONRY.

WITH THE ADVENT OF THE *BATON ROUGE* PROJECT, THE PHOTON TORPEDO WAS HEAVILY REVISED. THE TORPEDO'S SYSTEMS WERE MORE CAREFULLY DESIGNED, ALLOWING FOR A WARP-SUSTAINER FIELD (CHARGED BY THE FIRING SHIP'S OWN WARP ENGINES), AN IMPROVED GUIDANCE PACKAGE, AS WELL AS AN IMPROVED PAYLOAD. WHEN THE *USS RANGER* WAS LAUNCHED WITH THE NEW MK II TORPEDO ABOARD, SHE WAS A MATCH FOR ANY KNOWN HOSTILE VESSEL, AND IT APPEARED THAT THE BULK OF THE TORPEDO'S INITIAL DESIGN DIFFICULTIES WERE AT LAST OVERCOME.

THE MK IV TORPEDO, REPRESENTING INCREMENTAL TECHNOLOGY STEPS FROM THE 'CRUDE' MK II DESIGN, WAS INITIALLY PLANNED TO BE USED ON THE *CONSITUION* CLASS OF STARSHIP. POLITICS AND OTHER ISSUES DELAYED THE DEPLOYMENT OF THE MK IV FOR SOME TIME, KEEPING THE MK III IN SERVICE MUCH LONGER THAN INTENDED. BY THE TIME THE MK IV WAS UNVEILED, THE MK V DESIGN HAD ALREADY ENTERED PRELIMINARY TESTING.

THE MK V WAS COMMISSIONED AT 2253, AND IS BASICALLY AN UPDATED AND STABILIZED VERSION OF THE SMALLER MK IV. THE TUBE IS LONGER, MAKING USE OF NEWER AND MORE EFFICIENT SUB-SYSTEMS. UNFORTUNATELY, THE NEW INTERNAL SYSTEMS REQUIRE A DIFFERENT ARRANGEMENT FOR A TORPEDO DECK, NOTABLY IN THE ANTI-MATTER AND WARP SUSTAINER FEEDS. AS A RESULT, THE MK V TORPEDO HAS BEEN ASSIGNED EXCLUSIVELY TO THE NEW THE FP-3 LAUNCHER, AVAILABLE ONLY ON SOME OF THE NEWEST CLASSES OF STARSHIP.

### EDITOR'S ANNOTATIONS

THOUGH THE PHOTON TORPEDO IS ONE OF THE MOST RECOGNIZABLE ELEMENTS OF STAR TREK, IT ACTUALLY WAS A RELATIVE LATE-COMER TO THE SERIES, BEING FIRST SHOWN IN USE IN THE SECOND SEASON. THE WEAPON DOESN'T EVEN APPEAR IN THE *STAR TREK* WRITER'S BIBLE.

ONCE FINALLY INTRODUCED, THE TORPEDOES WERE OFTEN ADDED TO THE SCRIPTS BY THE TECHNICAL CONSULTANTS ON THE SHOW WHO FELT THAT PHASERS (THE MAINSTAY IN THE WRITER'S BIBLE) WERE BECOMING TOO MUCH THE 'MAGICAL BEAM' THAT THEY WANTED TO AVOID. TORPEDOES WOULDN'T BE 'STANDARD WEAPONS' ON THE *ENTERPRISE* UNTIL THE LATTER HALF OF *STAR TREK*'S SECOND SEASON.

ONCE ACCEPTED, THE SHOW'S WRITERS SIMPLY MOVED A LOT OF THE PHASERS MORE 'UNLIKELY' ABILITIES (SUCH AS SEEKING TARGETS AND PROXIMITY EXPLOSIONS) TO THE PHOTON TORPEDO, RELEGATING PHASERS TO THE MORE SENSIBLE ROLE OF DIRECT-FIRE HEAVY ENERGY WEAPONRY.

THE TORPEDO ITSELF WAS NEVER TRULY EXPLAINED THROUGHOUT THE ORIGINAL SERIES, THOUGH SOME OF ITS TECHNOLOGY WAS MENTIONED AT SOME LENGTH IN THE *NEXT GENERATION: TECHNICAL MANUAL*, AND OTHER WORKS. MOST OF THE INFORMATION HERE IS REVERSE ENGINEERING *NEXT GENERATION* ERA INFORMATION BACK TO THE ORIGINAL SERIES.

## PHOTON TORPEDO – MARK III

OFFENSIVE WEAPONRY SYSTEM

### SYSTEM DESIGNATION:

PHOTON TORPEDO ORDINANCE, MK III

### SYSTEM FEED:

LAUNCHER, FP-3

SYSTEM COMMISSION: 2239

YIELD (APPROX MAX): 20MT

### DRIVE SYSTEM:

IMPULSE: FCI-2 (.67C)

WARP: FMS-I, CWF II MAX, WHEN CHARGED

RANGE: 1.8MKM

### DIMENSIONS:

LENGTH: 1.7M

BREADTH: 1.0M

HEIGHT: 0.3M

MASS (DEADWEIGHT): 315KG

### GENERAL INFORMATION

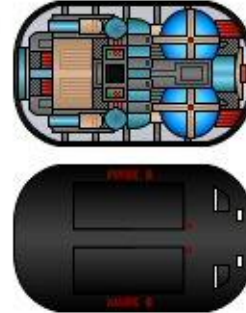
THE MARK III TORPEDO IS THE STARFLEET'S MAINSTAY HEAVY WEAPON, CAPABLE OF HIGH WARP SPEEDS AND HEAVY DESTRUCTIVE POWER. THE MARK III CAME INTO SERVICE IN 2239 ABOARD THE *USS RANGER* AND QUICKLY SAW FAVOR IN THE FEDERATION'S ARSENAL. THOUGH CURRENTLY INFERIOR TO THE KLINGON AND ROMULAN'S HEAVIEST WEAPONS, THE MK III PHOTON TORPEDO REMAINS ONE OF THE PREMIERE STARSHIP WEAPONS.

THE MARK III HOUSING IS NOTABLY MORE COMPACT THAN THE PREVIOUS VERSIONS, OR EVEN THAN THE MARK V, MAKING IT A COMFORTABLE FIT WITHIN THE FP-1 TORPEDO LAUNCHER FOUND IN MOST SHIPS OF THE *BATON ROUGE* AND *CONSTITUTION* CLASS DESIGN ERAS. IN ADDITION, THE FP-3 LAUNCHER, WHILE DESIGNED FOR THE MARK V, CAN JUST AS EASILY MAKE USE OF THE SMALLER MARK III TORPEDOES IF THE NEED ARISES.

TACTICALLY, THE MARK III IS EQUIPPED WITH A MID-GRADE SENSOR SUITE THAT ALLOWS FOR TRACKING OF ENERGY SIGNATURES, ALLOWING THE TORPEDO TO HOME IN ON TARGETS EVEN WHILE AT WARP SPEED. THIS TRACKING SYSTEM HAS PROVEN QUITE EFFECTIVE IN GENERAL, THOUGH THE CLOAKING DEVICES FOUND ABOARD LARGER ROMULAN AND A SELECT FEW KLINGON VESSELS POSE A SEVERE PROBLEM AT THIS TIME.

THE HOUSING FOR THE MARK III TORPEDO CAN BE USED TO HOUSE CLASS 1 AND CLASS II PROBES, THOUGH AT SOMEWHAT REDUCED RANGE THAN WITH THE SAME PROBES USED WITHIN THE MARK V TORPEDO HOUSING.

THE MARK III TORPEDO HAS, EFFECTIVELY, BEEN MADE OBSOLETE WITH THE ARRIVAL OF THE MARK IV AND MARK V VARIETIES, BUT THERE ARE MANY IN SERVICE THROUGH THE FLEET, ONLY BEING REPLACED WITH THE MARK IV WHEN THE SUPPLY OF OLDER DESIGN TORPEDOES HAVE BEEN EXHAUSTED.



### EDITOR'S ANNOTATIONS

TORPEDOES IN THE ORIGINAL *STAR TREK* SERIES ORIGINATED IN THE SHOW'S SECOND SEASON., BUT, THEY WEREN'T EVEN IN THE WRITER'S BIBLE. TORPEDOES ADDED LATER BY THE TECHNICAL CONSULTANTS ON THE SHOW WHO FELT THAT PHASERS WERE BECOMING TOO MUCH THE 'MAGICAL BEAM' THAT THEY SO STRONGLY WANTED TO AVOID.

MOST OF THE TECHNICAL INFORMATION ABOUT PHOTON TORPEDOES WOULD COME FROM LATER *STAR TREK* SOURCES, SUCH AS THE *NEXT GENERATION TECHNICAL MANUAL*, OR OFFICIAL BUT 'NON-CANON' SOURCES, SUCH AS THE FASA ROLE-PLAYING GAME.

TO CREATE A PHOTON TORPEDO FOR THE ORIGINAL SERIES, IT WAS NECESSARY TO GET THE 'LOOK' OF THE TORPEDO FROM *THE MOTION PICTURE* AND ONWARD, AND SHRINK IT DOWN TO FIT ONTO THE ORIGINAL SERIES' *ENTERPRISE*, WHICH DIDN'T HAVE THE PRONOUNCED LAUNCHING DECK.

THE ASSUMPTIONS MADE HERE WERE THAT THE TORPEDOES WERE SMALLER, NOT NEEDING THE LARGE LAUNCHER DECKS SHOWN IN THE MOVIES, AND LESS POWERFUL (AS EXPLICITLY STATED IN THE MOVIE). THE SPECIFICATIONS OF THE WRITE-UP GO FROM THAT ASSUMPTION.

THE IMAGE, MOSTLY, IS A REDUCED VERSION OF THE 'MOVIE' TORPEDO, BUT REPLACES THE DEUTERIUM AND ANTI-DEUTERIUM HOUSINGS WITH THE BLUE 'GLASS' HOUSINGS SHOWN IN THE ORIGINAL SERIES EPISODE 'OBSESSION'.

THE YIELD OF THE TORPEDO GIVEN HERE IS BASED ON THE ANNIHILATION OF THE AMOUNT MATTER AND ANTI-MATTER GIVEN WITHIN *STAR TREK*'S VARIOUS SOURCES.

## PHOTON TORPEDO – MARK IV

OFFENSIVE WEAPONRY SYSTEM

### SYSTEM DESIGNATION:

PHOTON TORPEDO ORDINANCE, MK IV

### SYSTEM FEED:

LAUNCHER, FP-1, FP-3

SYSTEM COMMISSION: 2250

YIELD (APPROX MAX): 22MT

### DRIVE SYSTEM:

IMPULSE: FCI-2 (.67C)

WARP: FMS-1, CWF II MAX, WHEN CHARGED

RANGE: 2.2MKM

### DIMENSIONS:

LENGTH: 1.7M

BREADTH: 1.0M

HEIGHT: 0.3M

MASS (DEADWEIGHT): 335KG

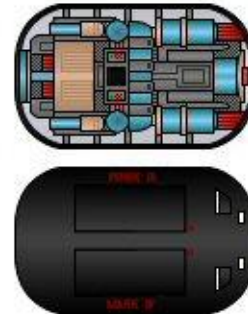
### GENERAL INFORMATION

THE MARK IV TORPEDO REPRESENTS LESS OF A LEAP OF TECHNOLOGY AND MORE AN APPLIED EXERCISE IN IMPROVED ENGINEERING. THE SAME BASIC CASING DESIGN HAS BEEN KEPT, BUT THE MATTER-ANTI-MATTER CONTAINMENT SYSTEM HAS BEEN REWORKED INTO A MUCH MORE EFFICIENT SYSTEM, DRAMATICALLY INCREASING THE RANGE OF THE TORPEDO WITHOUT ADVERSELY AFFECTING ITS POWER CONSUMPTION.

IN 2250, SUCCESSFUL TESTS OF THE MARK IV TORPEDO WERE COMPLETED, AND THE DESIGN WAS PLACED ABOARD ALL NEW *CONSTITUTION* CLASS BUILDS, PHASING THEM IN OVER THE OLDER MARK III DESIGNS. THIS WAS A RELATIVELY PAINLESS TRANSITION, FORTUNATELY, SINCE THE MARK IV DESIGN WAS SPECIFICALLY CREATED TO MAKE USE OF THE FP-1 LAUNCHER. [THE ILL-FATED FP-2 LAUNCHER WAS SUBSEQUENTLY CANCELLED AS TOO EXPENSIVE FOR THE TIME.]

THOUGH THE PRIMARY IMPROVEMENTS CAME IN EFFICIENCY OF DESIGN, THE MARK IV ALSO MADE USE OF IMPROVEMENTS IN SENSOR AND COMPUTER-TRACKING TECHNOLOGIES, THOUGH STILL INSUFFICIENT TO PENETRATE THE ROMULAN CLOAKING DEVICE SYSTEM.

THOUGH IT'S POSSIBLE THAT MORE REFINEMENT CAN BE MADE WITHIN THE MARK IV'S PARAMETERS TO ALLOW FOR GREATER YIELDS AND PERFORMANCE, STARFLEET LOOKS TO THE MARK IV AS THE END OF THE 'COMPACT' DESIGN RUN, CITING THE SUPERIOR FIREPOWER OFFERED BY ROMULAN AND KLINGON DESIGNS. WHILE THE MARK IV WILL REMAIN THE MAINSTAY TORPEDO FOR THE BULK OF THE FEDERATION FLEET, STAR FLEET CONSIDERS THE FP-3 LAUNCHER, WITH THE LARGER MARK V (AND BEYOND) TORPEDO DESIGNS TO BE MORE VERSATILE, AND MORE POTENT, SHORT-TERM ALTERNATIVE.



### EDITOR'S ANNOTATIONS

THE MARK IV TORPEDO IS MEANT, REALLY, JUST TO BRIDGE THE GAP BETWEEN THE TORPEDOES SHOWN IN THE ORIGINAL SERIES AND THOSE SHOWN IN THE MOVIES. THE IDEA HERE IS THAT THE UPGRADED TORPEDO DESIGN MAY HAVE SOME ISSUES TO REQUIRE A LARGER TORPEDO TUBE AND A CONSEQUENTLY MUCH LARGER TORPEDO LAUNCHING DECK THAN WHAT WAS SHOWN BEFORE.

EFFECTIVELY, THIS IS THIS GUIDE'S TAKE ON WHAT KIRK'S PHOTON TORPEDOES WERE LIKE FOR THE LATTER TWO SEASONS OF THE ORIGINAL *STAR TREK* TELEVISION SERIES.

## PHOTON TORPEDO - MARK V

OFFENSIVE WEAPONRY SYSTEM

### SYSTEM DESIGNATION:

PHOTON TORPEDO ORDINANCE, MK V

### SYSTEM FEED:

LAUNCHER, FP-3

SYSTEM COMMISSION: 2253

YIELD (APPROX MAX): 25MT

### DRIVE SYSTEM:

IMPULSE: FCI-2 (.75C)

WARP: FMS-I, CWF 13 MAX, WHEN CHARGED

RANGE: 2.4MKM

### DIMENSIONS:

LENGTH: 2.5M

BREADTH: 1.0M

HEIGHT: 0.3M

MASS (DEADWEIGHT): 425KG

### GENERAL INFORMATION

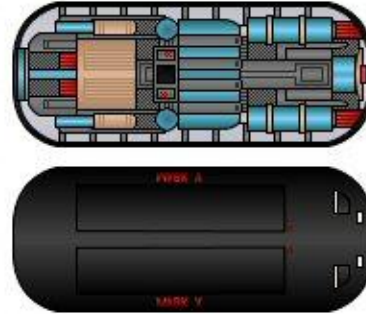
THE MARK V PHOTON TORPEDO WAS DESIGNED TO KEEP THE FEDERATION'S MILITARY CAPABILITIES ON PAR WITH THE POWERS OF THE KLINGON AND ROMULAN EMPIRES. THOUGH THE MARK III TORPEDO PROVED FORMIDABLE, THE SUPERIOR FIRE-POWER FIELDIED BY THE RIVAL POWERS CREATED AN UNTENABLE SITUATION.

THE MARK V ATTEMPT INVOLVED MAKING A MORE EFFICIENT USE OF THE MATTER/ANTI-MATTER CONTAINMENT SYSTEM, TAKING QUEUES FROM THE MARK IV DESIGN THE CHEMICAL IMPULSE SYSTEM WAS UPGRADED AND ENLARGED, AS WAS THE WARP SUSTAINER SYSTEM, INCREASING THE WEAPON'S EFFECTIVE RANGE.

THE MAXIMUM YIELD OF THE WEAPON ALSO INCREASED TO 25MT. THIS WASN'T QUITE WHERE STAR FLEET HAD HOPED, BUT IT PROVED MORE THAN ENOUGH TO BREAK THE THRESHOLD OF KLINGON AND ROMULAN DEFENSIVE SCREENS.

THE NEW DESIGN, HOWEVER, REQUIRED A REWORKING OF BOTH THE SHIP'S LAUNCHER SYSTEM AND WEAPON STOWAGE. THE NEW LAUNCHING 'DECK' REQUIREMENTS WERE COUPLED WITH A DEDICATED TORPEDO/DEFENSE COMPLEX. THE NEW 'TORPEDO DECK', ENCOMPASSING THE FP-3 LAUNCHER, WAS FIRST COMMISSIONED ON THE *USS MIRANDA*.

THOUGH THE MK V TORPEDO AND FP-3 LAUNCHER HAVE PROVEN SUCCESSFUL, APPROPRIATIONS DOES NOT FEEL THAT THE IMPROVEMENTS WARRANT A REFIT TO OTHER SHIP DESIGNS. A FEW NEW CLASSES OF THE *CONSTITUTION* DESIGN, DO MAKE USE OF THE NEW SYSTEM, BUT STARFLEET SEEMS TO BE CONTENT TO LARGELY 'SAVE' THE DESIGN FOR *ARCHERNAAR* OR LATER DESIGNS, AS OLDER SHIPS ARE PHASED OUT.



### EDITOR'S ANNOTATIONS

TECHNICALLY SPEAKING, THE MK V TORPEDO ISN'T 'CANON'. THE DESIGN IS BASED ON THE TORPEDOS SHOWN IN *STAR TREK: THE MOTION PICTURE*, AND SUBSEQUENT MOVIES. THOSE TORPEDOS ARE CLEARLY LABELED 'MARK VI', IMPLYING EARLIER DESIGNS. SINCE THE MARK VI TORPEDO IS EXPLICITLY STATED AS NEW IN *THE MOTION PICTURE*, IT ONLY MAKES SENSE THAT THE MK V WOULD BE THE 'TOP OF THE LINE' IN THE FEW YEARS BEFORE.

THE SPECIFICS OF THE TORPEDO GIVEN HERE ARE TAKEN FROM A VARIETY OF SOURCES, SOME OF WHICH OFFICIAL, SOME JUST FAN INTERPRETATION. IN THE END, THOUGH, THE IDEA HERE WAS TO MAKE SOMETHING MATCH UP WITH WHAT THE TORPEDOES ARE SHOWN TO DO, BOTH IN TERMS OF DAMAGE AS WELL AS ITS OTHER CAPABILITIES. EASIER SAID THAN DONE, HOWEVER.

THE INTERNAL DESIGN OF THE TORPEDO PRESENTED HERE IS BASED UPON THE GRAPHICS IN GE FABBRI'S *STAR TREK: FACT* FILES FOR A LATER MODEL, AND IS LARGELY THE SAME AS APPEARED THERE.

## PROXIMITY WEAPONS SYSTEMS

### OVERVIEW

#### DESCRIPTION

A PROXIMITY WEAPON IS A MODERN DAY TRAP. THE WEAPON, USUALLY A MINE, LIES IN WAIT FOR A VICTIM, THEN EXPLODES, EITHER DISABLING OR DESTROYING THE SHIP. MINES TEND TO BE SMALL AND PUT OUT A VERY LOW POWER SIGNATURE UNTIL ACTIVATED, MAKING THEM VERY HARD TO DETECT.

THE FEDERATION CURRENTLY MAKES LIMITED USE OF GRAVITIC MINES, SO NAMED BECAUSE THEY TARGET AND HOME IN ON THE ARTIFICIAL GRAVITY FIELDS CREATED WITH ENERGIZED STARSHIPS HULLS. WHEN THE MINE'S PASSIVE SENSORS DETECT A GRAVITATIONAL DISTURBANCE, THE LIMITED-BURN IMPULSE DRIVE OF THE MINE ACTIVATES, PROPELLING THE MINE TO THE TARGET. THE MINE THEN EXPLODES ON IMPACT.

GENERALLY, MINES ARE LAID DOWN IN AN AREA TO DESIGNATE A 'DO NOT CROSS' ZONE. THIS APPLIES TO BOTH FRIENDLY AND ENEMY VESSELS, AND MINES DO NOT DIFFERENTIATE BETWEEN THE TWO. [ATTEMPTS TO HAVE A 'FRIEND OR FOE' SYSTEM ON MINES USUALLY JUST RESULTS IN FALSE 'FRIEND' TRANSMISSIONS MAKING THE MINES USELESS.]

AS CAN BE EXPECTED, PROXIMITY WEAPONS OF THIS TYPE ARE NOT POPULAR WITH EITHER STARFLEET OR THE FEDERATION COUNCIL. THOUGH THE FEDERATION DOES MAINTAIN A SUPPLY OF SUCH WEAPONS, THEIR NUMBERS ARE RELATIVELY SCANT, AND ARE SELDOM DEPLOYED EXCEPT UNDER MORE DIRE CIRCUMSTANCES.

#### HISTORY

PROXIMITY MINES DATE BACK TO THE ORIGINAL NX PROJECTS BUT DIDN'T SEE USE UNTIL THE ROMULAN WAR. IN THAT AGE, CRUDE 'MAGNETIC' MINES WERE PUT INTO SUPPLY LINES, DESTROYING NEEDED RELIEF SHIPS AND KEEPING INVASION FORCES AT BAY. THOUGH CRUDE, THE NUMBER AND POWER OF THE MINES WAS SUFFICIENT TO PREVENT ANY GROUND INVASION OF EITHER FEDERATION OR ROMULAN TERRITORY.

AT WAR'S END, OF COURSE, THE NEW FEDERATION ORDERED THE EARTH FLEET TO CLEAR OUT THE MINES, AND PLACED HEAVY SANCTION ON THEIR USE. IN A TIME OF RELATIVE PEACE, HOWEVER, FEW OBJECTED TO ELIMINATING SUCH A THREAT TO THE SPACELANES.

BY 2216, THE GRAVITIC MINE OFFICIALLY REPLACED THE MAGNETIC MINE, BUT ONLY UNDER THE CONDITION THAT A NEW GRAVITIC MINE MUST REPLACE A MAGNETIC ONE THAT WAS EITHER DESTROYED OR SCRAPPED. BY 2217, HOWEVER, THE TASK WAS DONE, AND THE NEW MK GRAVITIC MINES WERE IN PLACE.

THE GRAVITIC MINE REMAINED RELATIVELY UNCHANGED UNTIL 2248, WHERE IMPROVEMENTS IN SENSOR TECHNOLOGY PROMPTED A 'SAFER' AND 'MORE CAREFUL' MINE UPGRADE. AGAIN, THE DEMAND WAS THAT ALL EXISTING MK I GRAVITIC MINES BE

REPLACED, ONE AT A TIME, WITH ONLY A MODEST 'OVERRUN' STOCKPILE ALLOWED.

FEDERATION DEPLOYMENT OF GRAVITIC MINES IS EXTREMELY LIMITED, WITH ONLY A FEW SECTORS IN THE KLINGON AND ROMULAN NEUTRAL ZONES MAINTAINED TO PROTECT COLONY WORLDS, OR WORLDS THAT WOULD BE EASY PREY TO ENEMY ACTIONS. IT SHOULD BE NOTED, HOWEVER, THAT OTHER GOVERNMENTS SHOW FAR LESS HESITATION TO USE MINES AND PROXIMITY WEAPONS THAN THE FEDERATION.

#### EDITOR'S ANNOTATIONS

THOUGH *STAR TREK* DOES MENTION MINES AT VARIOUS POINTS, THEY SEEM TO BE VERY RARE AND ALMOST ALWAYS REGARDED AS A 'BAD THING'. INDEED, THE FIRST FEW TIMES WE HEAR OF THEM, SOME POOR *INNOCENT* SHIP IS HIT BY ONE. THIS IS PRETTY CONSISTANT WITH THE MODERN WORLD'S TAKE ON MINES. THEY MAKE SENSE, FROM A MILITARY STANDPOINT, BUT SINCE THEY CAN BE AROUND LONG AFTER THE CONFLICT FOR WHICH THEY'RE PLACED ENDS, THEY CAN OFTEN PROVE MORE OF A LONG TERM HAZARD THAN A SHORT TERM ADVANTAGE.

SINCE MINES ARE SUCH A MINOR PART OF *STAR TREK*, THERE ISN'T A LOT OF INFORMATION ON THEM. THIS GUIDE BASICALLY TREATS THEM AS MODIFIED TORPEDOES, SITTING THERE WAITING FOR SOMEONE TO RUN TOO NEAR TO ONE OF THEM.

POLITICALLY, THERE MUST BE STRONG OPPOSITION TO USE MINES WITHIN THE FEDERATION, EVEN IN THOSE TIMES WHERE IT MAKES SENSE TO DO SO [MOST NOTABLY IN *THE NEXT GENERATION* AGAINST THE BORG, AND ALSO IN *DEEP SPACE NINE* AGAINST THE DOMINION].

## GRAVITIC MINE – MARK II

OFFENSIVE PROXIMITY WEAPONRY SYSTEM

### SYSTEM DESIGNATION:

GRAVITIC MINE ORDINANCE, MK II

### SYSTEM FEED:

LAUNCHER, FP-I, ALSO MANUAL

SYSTEM COMMISSION: 2249

YIELD (APPROX MAX): 20MT

### DRIVE SYSTEM:

IMPULSE: FCI-2 (.75C)

RANGE: 50,000KM

### DIMENSIONS:

LENGTH: 1.5M

BREADTH: 1.1M

HEIGHT: 0.3M

MASS (DEADWEIGHT): 325KG

### GENERAL INFORMATION

THE GRAVITIC MINE IS A WEAPON THAT STARFLEET USES WITH RELUCTANCE. IT IS A PASSIVE, 'UNCARING' WEAPON THAT WILL REMAIN ACTIVE FOR DECADES UNTIL EITHER DEACTIVATED OR UNTIL SOMEONE STUMBLES UPON IT, BE THEY ENEMY OR NOT. AS SUCH, THE USE OF GRAVITIC MINES IS EXTREMELY LIMITED.

IN MOST RESPECTS, A GRAVITIC MINE IS LIKE A PHOTON TORPEDO. WHEN PLACED, HOWEVER, IT SIMPLY REMAINS IN RELATIVE STATIONARY POSITION UNTIL ARMED. WHEN ARMED, IT'S SENSORS ATTEMPT TO IDENTIFY THE GRAVITIC FIELDS WHICH EMANATED FROM CHARGED HULLS. WHEN THE MINE'S SENSORS FIND A TARGET, THE MINE THEN CHARGES ITS OWN IMPULSE DRIVE TO LOCK IN AND HOME ON THE GRAVITIC SIGNATURE OF THE TARGET SHIP. THE MINE THEN EXPLODES ON IMPACT WITH THE REMAINING YIELD AVAILABLE.

ALL GRAVITIC MINES HAVE AN ENCODED COMMAND ROUTINE TO EITHER SELF-DESTRUCT OR GO INERT FOR WHEN THE CONDITIONS THAT REQUIRED THEIR PLACEMENT HAVE PASSED.

CURRENTLY, THE ONLY ACTIVE GRAVITIC MINEFIELDS PLACED BY THE FEDERATION ARE IN HAZARD ZONES NEAR KLINGON AND ROMULAN SPACE. THEIR PRESENCE, THOUGH MILITARILY SOUND, REMAINS A POINT OF POLITICAL CONTENTION WITHIN THE FEDERATION.

THOUGH THE TECHNOLOGY FOR THE GRAVITIC MINE IS NOW BECOMING OUTDATED, IT'S UNLIKELY THAT A MK-III WILL BE APPROVED IN THE NEAR FUTURE, UNLESS SOME ENEMY TECHNOLOGY SPECIFICALLY RENDERS THE MINES OBSOLETE. THE FEDERATION APPROPRIATIONS COMMITTEE DOES NOT SEE THIS HAPPENING IN THE FORESEEABLE FUTURE.



### EDITOR'S ANNOTATIONS

GRAVITIC MINES ARE MENTIONED ON AND OFF THROUGHOUT TREK, BEING MOST NOTORIOUS IN *THE WRATH OF KHAN*, WHERE THEY'RE IMPLIED TO BE KLINGON WEAPONS. OF COURSE, THEY MADE A FEW APPEARANCES IN LATER SERIES WHERE THE FEDERATION IS CLEARLY MAKING USE OF THEM AS WELL.

IT'S HARD TO IMAGINE THE FEDERATION OF THE MORE 'MILITARY-MINDED' ORIGINAL SERIES NOT HAVING THESE WHEN *THE NEXT GENERATION* ERA OBVIOUSLY DID. SO, THE DESIGN HERE BASICALLY TAKES THE MINES SHOWN IN THE LATER SERIES AND PUTS THEM BACK INTO THE ORIGINAL SERIES ERA.

THE DESIGN GIVEN HERE IS BASED ON ARTWORK FOR THE 'ANTI-MATTER MINES' SHOWN IN LATER TREK SERIES, SOMEWHAT ALTERED TO MAKE USE OF THE PHOTON TORPEDO LOOKS, JUST TO BE CONSISTANT.

## TRI-COBALT DEMOLITIONS TORPEDO - MARK IV

SPACE DEMONLITIONS SYSTEM

### SYSTEM DESIGNATION:

TRI-COBALT ORDINANCE, MK IV

### SYSTEM FEED:

LAUNCHER, FP-I, FP-3

SYSTEM COMMISSION: 2250

YIELD (APPROX MAX): 3MT

### DRIVE SYSTEM:

IMPULSE: FCI-2 (67C)

WARP: FMS-I, CWF II MAX, WHEN CHARGED

RANGE: 2.2MKM

### DIMENSIONS:

LENGTH: 1.7M

BREADTH: 1.0M

HEIGHT: 0.3M

MASS (DEADWEIGHT): 335KG

### GENERAL INFORMATION

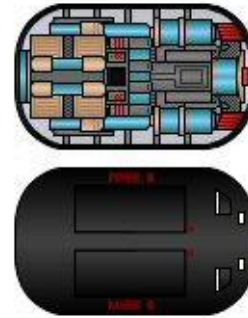
ENCASED IN A MARK IV TORPEDO HOUSING, THE TRI-COBALT DEMOLITIONS TORPEDO IS DESIGNED TO DESTROY AND 'PURGE' A LARGE INSTALLATION OR SERIOUS, UNCURABLE BIOLOGICAL INFESTATION. THE DEVICE DELIVERS A NUCLEAR PAYLOAD WHICH EMITS POTENT, DESTRUCTIVE RADIATION. WHILE THE INITIAL YIELD LOADOUT SEEMS RELATIVELY LOW, AT ONLY 4MT, THAT YIELD IS A CONSISTANT, LONG TERM RADIATION BURN THAT CAN LAST DAYS, WEEKS, OR EVEN YEARS DEPENDING ON THE AMOUNT OF COBALT ISOTOPE USED.

THE TRI-COBALT 'TORPEDO' WAS FIRST CREATED DURING THE LATTER PORTION OF ROMULAN WAR, BUT THANKFULLY NEVER USED. AFTER COMPLETION AND TESTS, THE WEAPON WAS DEDICATED FOR 'EXTREME USE ONLY', AND ITS INTENDED USE AS PLANETARY BOMBARDMENT WAS EXPRESSLY FORBIDDEN.

THOUGH SOME FEDERATION SHIPS DO MAINTAIN A VERY FEW OF THESE WEAPONS, THEIR USE REMAINS LIMITED AND PRIMARILY DESIGNED FOR THE DESTRUCTION OF LARGE, DANGEROUS SPACE STRUCTURES (SUCH AS DERELICT SHIPS).

ONLY ONE ON OCCASION HAS THE DEVICE BEEN USED ON A PLANETARY SURFACE, WHERE IT WAS USED TO KILL AN OTHER-WISE UNCURABLE VIRUS WHICH CAUSED A COMPLETE CELLUAR BREAKDOWN IN ANY AND ALL ANIMAL TISSUE. THE TRI-COBALT WEAPONS SUCCEEDED IN DESTROYING ANY TRACE OF THE VIRUS, BUT ALSO MADE THE REGION IN WHICH IT WAS FIRED UNINHABITABLE FOR THE NEXT THREE YEARS.

USE OF THE TRI-COBALT CHARGE IN ANY CIRCUMSTANCE ON AN INHABITED AREA OR VESSEL IS EXPRESSLY FORBIDDEN BY STARFLEET REGULATIONS.



### EDITOR'S ANNOTATIONS

TRI-COBALT DEVICES GET TWO MENTIONS IN *STAR TREK*. THE FIRST IS IN "A TASTE OF ARMEGEDDON" WHERE THE PLANET VENDIKAR SIMULATES THEIR USE TO SIMULATE DESTROYING THE *ENTERPRISE*. THE WEAPONS ARE CONSIDERED CRUDE BY KIRK'S TIME, BUT THEY'RE FAMILIAR WITH THEM.

WE SEE THEM AGAIN IN *STAR TREK: VOYAGER'S* PREMIERE, THIS TIME AS A FEDERATION WEAPON. HERE THE WEAPON SEEMS MUCH MORE ADVANCED, CAPABLE OF RIPPING SUBSPACE APART AND DESTROYING LARGE EMPLACEMENTS. ODDLY, WE NEVER SEE *THIS* USE OF THE WEAPON AGAIN IN THE SERIES, EVEN WHEN IT WOULD MAKE SENSE TO USE IT.

THIS GUIDE CONSIDERS THE TRI-COBALT BOMB TO BE A TECHNICAL UPDATE OF THE *REAL* COMBAT BOMB. A VERY POWERFUL, EXTREMELY TOXIC NUCLEAR WEAPON WHICH HAS A PROLONGED RADIOACTIVE LIFE. IN THE 1960S, WHERE THE TERM ORIGINATED, THE IDEA OF A COBALT BOMB WAS THE ULTIMATE TERROR, THE WORST KIND OF NUCLEAR WEAPON.

THE *OUTRIGHT WRONG* EXPLANATION GIVEN IN *VOYAGER'S* TECHNOBABBLE WILL BE IGNORED, THOUGH THE ON SCREEN EFFECT OF THE DESTRUCTION OF THE CARETAKER'S ARRAY IS CONSISTANT WITH A 'BURNING' NUCLEAR REACTION OF THE TYPE A COBALT BOMB WOULD DO.

