

# Unified Manipulation Technology Suite

Unified manipulation technology is essentially the marriage of [Lorath Matriarchy](#) and [United Manufacturing Cooperative](#) electromagnetic field and gravitic field manipulation technology, effectively integrated into a single hardware and software suite.

## Information

### Development

Developed YE 33 – YE 35, the unified manipulation system was originally developed as separate platforms, with incorporated components already in common use in Lorath [propulsion](#), [shielding](#), and [weapon systems](#). During the design of the unified manipulation suite, other technologies beyond those which were Lorath developed were also investigated, such as technology produced by [Kakutama Heavy Industries](#), and the [United Manufacturing Cooperative](#). What came of the Matriarchy's development project, was a suite which provided the combined functions of a high-intensity multi-frequency EM field system, a distortion field system, and a gravitic field device.

Development Years: YE 33-35 Full Release: YE 36

## Technical Information

### Electromagnetic Field Component

Integrated into the unified manipulation suite, the electromagnetic field component is actually the combination of several separate components. Projector and emission hardware from communication, weapon, shield, propulsion, and even sensor systems were studied to produce the three EM-manipulation components of the suite, which essentially were divided between high-intensity, mid-intensity, and low-intensity field systems.

#### High Intensity Field Component

Mainly comprised of components derived from weapon systems, the high intensity field component is designed to manipulate electromagnetic fields in a manner which has a direct and notable effect on matter, even at extended distances. When properly utilized, the high intensity field component is capable of exerting magnetic forces to move objects at a distance, levitate objects, as well as produce directional force fields. This component is also capable of being used to manipulate matter on an atomic and subatomic scale, allowing for atoms to be accelerated, decelerated, cooled, heated, and even broken down into the individual particles that comprise the atom.

#### Mid Intensity Field Component

Developed from components used in propulsion systems and some shield systems, the mid-intensity field component is mainly used for the purpose of creating stable electromagnetic fields for the purpose of sustained levitation, control of object momentum, gas ionization, and for the precision manipulation of ferromagnetic objects.

### Low Intensity Field Component

Based off of sensor and communication equipment, the low-intensity field component is used for the purpose of producing controlled and easily monitored electromagnetic fields, in a manner which is suitable for usage in the original context of the components, allowing for the unified suite to be used as a communications emission system and scanning system.

### Distortion Field System

Largely developed from third party [distortion field](#) systems, and [power](#) systems. Distortion field components of the unified system allows for the limited manipulation of universal constants, this allows for object mass to be manipulated, distortion fields to be produced or interfered with, remote energy projection, and limited capability in regard to dimensional layer interaction and manipulation, strong and weak force manipulation, and limited aether tapping.

### Gravitic Manipulator Component

Developed from commercially available weaponized gravitic field weapons, [gravitic shielding](#), and graviton generators, the gravitic manipulator component of the unified suite allows for the remote manipulation of gravity. When used, the gravitic manipulator component allows the user to manipulate the expression of mass as weight, the production of electrogravitic fields for the purpose of energy discharge, creation stabilized gravitic fields for shielding purposes, system localized levitation, and limited time dilation and constriction effects.

### Computing Component

The computing component of the system is a [ARIA Type 3 LNV](#) processor, paired with a conventional quantum-computing system. When operated in tandem, the computational system of the unified suite allows for the rapid computation of field models allowing for on-the-fly manipulation of fields produced by the system to achieve instructions put into the system by the user interface, which can be a conventional physical interface, cybernetic interface, or [Neural Interface System](#).

### Supportive Hardware

To function properly, the unified manipulation suite requires the following external components;

- Power supply, power-armor grade antimatter system or greater.
- User interface system, an exterior user-interface is required.
- Mounting, the system must be integrated into a housing or mounted into a vehicle. These housings can vary between weapon housings meant for tactical usage, to general purpose arrays for utility usage.
- Cooling, due to the high power consumption of the unit, a cooling system is required, usage of chemical coolants and electromagnetic cooling is recommended.
- Projector Assembly, while the suite provides the means of producing a given field, there is a lack of a focusing apparatus which would allow for direction of the produced field, this component must be provided as an add-on due to the mounting requirements.
- Shielding, protective shielding for equipment and materials near the suite must be integrated as an add-on, ideally as part of the vehicle or mounting housing which the system is integrated into.

## Application

### Personnel Scale

Personnel scale application of the unified field suite is not recommended, and due to size constraints, prevents the integration of distortion technology. Furthermore, component limitations prevent the sustained manipulation of objects with a mass exceeding 680kg. It should also be noted that burn-out of components is drastically increased in personnel scale applications when utilized for high-demand applications such as sustained motion of objects, sustained force field projection, atomic manipulation, and the excitement of matter for durations exceeding ten seconds of sustained usage. Furthermore, gravitic field manipulation functions are limited to weight reduction effects with an increase or decrease of one-half the object's expressed weight, low-intensity electrostatic field discharge, and limited gravitic shield effects. Maximum speed in which an object can be accelerated is 725 Meters Per Second for an object with an expressed weight of 521 grams.

Personnel scale units house primary components within a two foot by one-half foot backpack, with projection and field manipulation components attached as axillary components, which are fitted over the forearms and shins of the user-operator, with output and control interfaces placed over the digits of the user, allowing for gesture-based command and control.

### Damage System Caps

Unable to produce a harmful field output exceeding 4 PDR

Unable to produce a protective field output exceeding 5 Structural Points

### Small Vehicle & Power Armor Scale

Power armor and small vehicle scale application of the unified field suite is possible, however, limitations are present in the form of sustainability and output. Sustained manipulation of expressed object weight is

limited to objects with a mass of up to 1,814kg. Sustainability of high-demand functions is limited to two minutes before automatic shutdown to prevent system burn-out, high-demand functions include sustained force fields, and the excitement of matter on a molecular level. Maximum acceleration which can be imparted upon an object is limited to 3450 Meters Per Second for an object with an expressed weight of 2236 grams when using a general-purpose unit, if the system is installed in a weapon housing with proper power supplied, imparted speeds can reach .10c. Maximum weight expression manipulation is a 75% decrease to an object's expressed weight. Gravitic manipulation can allow for the increase of gravity within a field of up to 10Gs.

Integration into power armor units is roughly comparable to personnel scale units, however, in power armor applications projector systems can be integrated into the hands, forearms, legs, and other key control surfaces to allow for increased capability in regard to EM/Gravitic field manipulation, as well as sustainable distortion fields. Mounting, housing, and projection systems may vary by power armor design.

### **Damage System Caps**

Unable to produce a harmful field output exceeding 3 ADR

Unable to produce a protective field output exceeding 10 Structural Points

### **Large Vehicle Scale (shuttles, tanks, frames, etc)**

Large vehicle application of the unified field suite is easily achieved, and provides the full range of function available to the system. Maximum velocity which can be imparted to an object is limited to 12,175 Meters Per Second, for objects with an expressed weight of up to 113 kg. Systems housed in proper weapon housing with sufficient power supplies can impart acceleration of up to .15c upon objects using electrogravitic acceleration. Objects can be manipulated with an expressed weight up to 3,750kg. Maximum expressed weight manipulation available is a 90% reduction. Maximum duration of high-demand system usage is ten minutes. Gravitic manipulation can allow for the increase of gravity within a field of up to 55Gs.

Unit integration in frames is roughly comparable to that of power armor integration, while being scaled to an increased size specification. Shuttle, tank, fighter, and similar sized units meanwhile have drastically varying mounting and housing needs, and can vary greatly between applications. Due to the size of these applications, dedicated projection and field manipulation systems can be integrated to allow for increased directional projection capabilities.

### **Damage System Caps**

Unable to produce a harmful field output exceeding 5 ADR

Unable to produce a protective field output exceeding 15 Structural Points

## Starship Scale and Larger

Installation of the unified field system is recommended for starship applications, when installed upon an appropriate starship, the unified field system is capable of reducing expressed weight by 100%, objects with an expressed weight up to 9,001kg are able to be manipulated indefinitely, and however, objects exceeding such a weight will induce system strain. Sustained high-demand usage is available up to 30-minutes. There is no expressed weight limitation to object acceleration, however, system range is a limiting factor; maximum velocity for objects to be accelerated to by the system is 2,199,900 M/s for general application, .25c when system is installed with a weapon housing and assembly. A gravitic field can be produced with an effect of up to 125Gs.

### Damage System Caps

Unable to produce a harmful field output exceeding Tier 11, Medium Anti-Starship

Unable to produce a protective field output exceeding 25 Structural Points

## Applicable Ranges & Values

Matter manipulation ranges indicate maximum range in which electromagnetic field, gravitic, or distortion effects can be enacted upon a target.
Signal transmission output range indicates the maximum range in which the system can be used to reliably transmit an outgoing signal for purposes of communication, sensor sweeps, or similar purposes.
Electromagnetic projection range indicates the maximum range in which directed electromagnetic emissions can effectively be applied for ranges between infra-red and gamma radiation, as well as electromagnetic energy potentials
Distortion projection range indicates the maximum range in which a directed release of spatial distortion energy can be effectively applied and directed while maintaining optimal target accuracy.

### Personnel Scale

Maximum Matter Manipulation Range: 200 Meters Maximum Signal Transmission Output Range: 3 Light-Seconds Maximum Gravitic Electrostatic Discharge Range: 300 Meters. Maximum Electromagnetic Projection Range: 200 Meters Maximum Propulsion Speed – Electro-Gravitic: 355 Kph

### Power Armor Scale

Maximum Matter Manipulation Range: 10 Km Maximum Signal Transmission Output Range: 5,000 Light-Seconds Maximum Electromagnetic Projection Range: 125 Km Atmospheric, .5 Light-Seconds In Vacuum Maximum Gravitic Electrostatic Discharge Range: .5 Light-Seconds. Maximum Distortion Projection Range: 1 Light-Seconds Maximum Propulsion Speed – Electro-Gravitic Atmospheric: 1000 Kph Maximum Propulsion Speed – Electro-Gravitic Vacuum: .20c Maximum Propulsion Speed – Distortion: 5c

## Fighter, Tank, Frame, Etc Scale

Maximum Matter Manipulation Range: 30 Km Maximum Signal Transmission Output Range: 10,000 Light-Seconds Maximum Electromagnetic Projection Range: 250 Km Atmospheric, 1 Light-Second in Vacuum Maximum Gravitic Electrostatic Discharge Range: 1 Light-Second. Maximum Distortion Projection Range: 2 Light-Seconds Maximum Propulsion Speed – Electro-Gravitic Atmospheric: 6500 Kph Maximum Propulsion Speed – Electro-Gravitic Vacuum: .25c Maximum Propulsion Speed – Distortion: 500c

## Starship Scale

Maximum Matter Manipulation Range: 256 Km Maximum Signal Transmission Output Range: 25,000 Light-Seconds Maximum Electromagnetic Projection Range: 8,000 Km Atmospheric, 2 Light-Second in Vacuum Maximum Gravitic Electrostatic Discharge Range: 2 Light-Seconds. Maximum Distortion Projection Range: 2 Light-Seconds Maximum Propulsion Speed – Electro-Gravitic Atmospheric: 6500 Kph Maximum Propulsion Speed – Electro-Gravitic Vacuum: .275c Maximum Propulsion Speed – Distortion: 500c

## Notes

A significant note should be made that the unified manipulation technology suite is not intended to be a replacement to any dedicated system such as a gravitic shield generator, combined field system, continuum distortion drive, railgun weapon, or xaser weapon platform. Mainly, the unified field technology suite is intended for utility purposes, or to be applied to vehicles in which space is at a premium, or is to be used by personnel as a means of providing access to low-end field manipulation capabilities.

A field test was conducted with L'manel Il'ana “Dancer” Jin'nira, a Bull aspected L'manel. Nearly as tall as a Fyunen.

## OOC Notes

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