

About the Windows 95 Version

- Uses Microsoft DirectX 3 video and audio drivers. It is important that you check with your audio and video card manufacturer to determine if your hardware will support DirectX. Please see the DirectX section in this file for more information.
- Should not be installed to a compressed drive.

Activision Customer Support

If you have any comments, questions or suggestions about *Mercenaries 3Dfx* or any other Activision product, please feel free to contact us. If you are experiencing difficulty please consult the *Mercenaries 3Dfx* Help file before contacting Customer Support. The help file contains the answers to some of our most frequently asked questions and may quickly provide a solution to your problem. If, after reviewing the *Mercenaries 3Dfx* Help file, you are still experiencing problems, please feel free to contact us through any of the services listed. So that we can better help you, please be at your computer and have the following information ready:

1. Complete product title
2. Exact error message reported (if any) and a brief description of the problem
3. Your computer's processor type and speed (e.g. 486-66, Pentium 90MHz...)
4. Video and sound card makes and models (e.g. Diamond Stealth 64 video, Sound Blaster 16 sound...)

Customer Support:

[North America](#)

[UK and Europe](#)

[Australia and Pacific Rim](#)

All other locations, except Japan, are supported through our online services only.

Hint Line:

[I Want Game Hints! Where do I go?](#)

Locations for Updates and/or Patches:

[Where do I go for Game Updates and/or Patches?](#)

AutoPlay

If the *Mercenaries 3Dfx* title screen does not appear, try performing the following steps:

1. With the disc in your CD-ROM drive, double-click on the **My Computer** icon on your desktop or right-click on it and select the **Open** option.
2. In the **View** pull-down menu, select **Refresh**.
3. Double-click on the *Mercenaries 3Dfx* CD icon in the window or right-click on it and choose the **AutoPlay** option.
4. After the *Mercenaries 3Dfx* title screen appears, click on the **Play** button (it will appear as **Install** before you have installed the game).

If the title screen still does not appear, please check the following:

1. Make sure the CD is clean and properly placed in the CD-ROM drive.
2. Verify that your CD-ROM driver is optimized for use with Windows 95. To do this:
 - a. Open the **Control Panel** and double-click on the **System** icon. Click on the **Performance** tab. If any of your hardware drivers are not fully optimized for use with Windows 95, they will be listed here with an explanation of the exact problem and suggestions on how to fix it. If you cannot get your system to perform optimally, please consult [Microsoft](#) support.
 - b. Or, Click here to begin the [Hardware Conflicts Troubleshooter](#) .
3. Verify that the Auto-Insert Notification for your CD-ROM is enabled. To do this:
 - a. Choose the System Properties dialog box by right-clicking on the **My Computer** icon and then clicking on **Properties**.
 - b. Choose the **Device Manager** tab in the dialog box.
 - c. Select and double click **CD-ROM**.
 - d. Select your CD-ROM drive and click the **Properties** button.
 - e. Select the **Settings** tab of the Properties dialog box.
 - f. Make sure the **Auto-insert notification** box is checked. If not, click on it to make it checked.
 - g. Click **OK** to accept your changes.
4. Double-click on the **My Computer** icon on your desktop. Select the **Refresh** option located in the **View** pull-down menu of your main hard drive window. When the *Mercenaries 3Dfx* icon appears, double click on it; The *Mercenaries 3Dfx* title screen should appear.
5. You can also start *Mercenaries 3Dfx* from the **Start** button on your desktop. Click the **Start** button from your taskbar, select **Programs|Mercenaries 3Dfx Edition|Mercenaries 3Dfx** and this will allow you to start the game.

If for some reason you do not wish to use AutoPlay, you can turn it off using the following steps:

1. Choose the **System Properties** dialog box by right-clicking on the **My Computer** icon and then clicking on **Properties**.
2. Choose the **Device Manager** tab in the dialog box.
3. Select and double click **CD-ROM**.
4. Select your CD-ROM drive and click the **Properties** button.
5. Select the **Settings** tab of the *Properties* dialog box.
6. Click the **Auto-insert notification** box on that tab so that it is unchecked.
7. Click **OK** to accept your changes.

BattleMech Components

The internal structure of a BattleMech is composed of eight sections: Head, Center Torso, Left and Right Torso, Left and Right Arms, and Left and Right Legs. Each of these sections serves as a designated area for carrying weapons, ammunition or additional equipment in a BattleMech. The following are the systems that comprise a BattleMech:

Engines

BattleMechs can be equipped with a wide variety of engines to determine maximum land speed. There are two types of engines: standard or XL engines. The XL engines are retrofit standard engines with new and lighter shielding materials, greatly reducing overall engine weight at the cost of compactness. Although normal engine weight is halved, additional engine critical space must be allocated to both the Right and Left Torsos.

Cockpit/Gyroscope

Every BattleMech includes a cockpit containing the MechWarrior's control station, life-support system and electronic sensors. Damage to a 'Mech's control components impacts its ability to move and jump. In addition to a cockpit, every BattleMech is equipped with a powerful gyroscope to keep it upright and able to move.

Internal Structure

Internal structure is the backbone of the 'Mech. A BattleMech's internal structure can be designed in using one of two advanced technologies: standard or Endo Steel. Made with zero-G manufacturing techniques that mix high-density steel with lower-density titanium and aluminum, Endo Steel is twice as strong per unit of weight as standard materials. However, strength is traded at an increase in overall bulk requiring more critical space in a 'Mech's internal structure.

Heat Sinks

Heat sinks supply a BattleMech with the ability to dissipate heat internally. Double heat sinks can cool a 'Mech much more efficiently with a heat-dissipation rate that is twice as fast as that of standard heat sinks. Although double sinks weigh the same as standard heat sinks, the double versions are considerably bulkier and take up extra space aboard a 'Mech. At one ton and two critical slots each, Torso-mounted double sinks tend to limit space for weapons. Jump Jets Most 'Mechs can be equipped with jump jets located in pods in the Leg and Torso areas to allow jump movement. Jump jets may only be mounted if there are sufficient critical slots in these areas. To gain desired jump capacity, a MechWarrior must evaluate the environmental conditions of the mission as well as the overall mass of the 'Mech being customized before determining the number of jump jets being added.

Armor

A BattleMech's armor provides the protective covering for its internal structure and critical components. There are two types of armor a pilot can choose to assign to a BattleMech: normal or Ferro-Fibrous armor. Ferro-Fibrous armor is an improved version of the ordinary BattleMech armor in that it greatly increases a 'Mech's tensile strength. Although this advanced armor gives a 'Mech a greater armor factor for the same weight, it is bulkier than its equivalent weight of standard armor plating and requires more critical space in a 'Mech's internal structure.

Weapons Systems

Pilots can equip their 'Mechs with any mix of weapons their assigned base chassis will support. MechWarriors must weigh the advantages of using different energy, missile or ballistic weapons systems against the weight and space considerations of all possible combinations. Some weapons systems are more powerful at the expense of greater heat buildup, while other weapons cause less damage but have greater distance advantages.

Ammunition

All weapons other than energy weapons (e.g., lasers) require a pre-allocated supply of ammunition that can be determined by each pilot. Ammo must also be allocated to critical slots within a 'Mech's internal structure.

Equipment

Some BattleMechs are equipped with CASE (Cellular Ammunition Storage Equipment), a damage-control technology that mitigates the effects of internal ammunition explosions. When ammo explodes in a location with CASE, the force of the explosion is directed away from the 'Mech's vital components, such as the cockpit or the engine. BattleMechs without CASE can be destroyed by a single internal ammunition explosion.

Criticals

All components housed within a BattleMech must be assigned to critical slots within a 'Mech's internal structure. The number of available critical slots in each section of a 'Mech's base chassis limits the mix of weapons and equipment with which any particular 'Mech can be configured. The construction of a BattleMech cannot be completed until each item has been assigned to the requisite number of critical slots.

CMOS: Complementary **Metal-Oxide Semiconductor** - An energy-saving chip fabricated to duplicate the functions of other chips, such as memory chips or microprocessors. The system settings for most PCs are stored in the CMOS.

Can I install *Mercenaries 3Dfx* to a hard drive that is compressed?

We do not recommend installing this program to a compressed drive. Please install to a non-compressed drive and run the program from there.

Can I listen to the Mercenaries 3Dfx soundtrack on my audio CD player?

Yes. The mission music is spooled from the CD. Starting with track 2, all the music tracks will play on an audio CD player.

Can I run *Mercenaries 3D* under Windows 3.1, Windows NT or OS/2?

Unfortunately, the answer to this question is no. Please see [Supported Operating Systems](#) for more information.

Changing Standard Windows 95 Cursors

Check to make sure that you have not changed the standard Windows 95 cursors. Doing so may cause video corruption. We have especially found this to be the case with 3D and animating cursors.

Checking Your Sound Card for Conflicting Settings (Windows 95)

To check your sound card for conflicting settings:

1. Go to the **Start** menu on your task bar, select **Setting|Control Panels**.
2. Double-click on the **System** icon, then choose the **Device Manager** tab.
3. Select **Sound, Video, and Game Controllers**, and double-click on your specific sound card.
4. Check the **Device Status** box to see if your card is working properly.
5. Select the **Resource** tab and check the Conflicting device list for any conflicting devices.

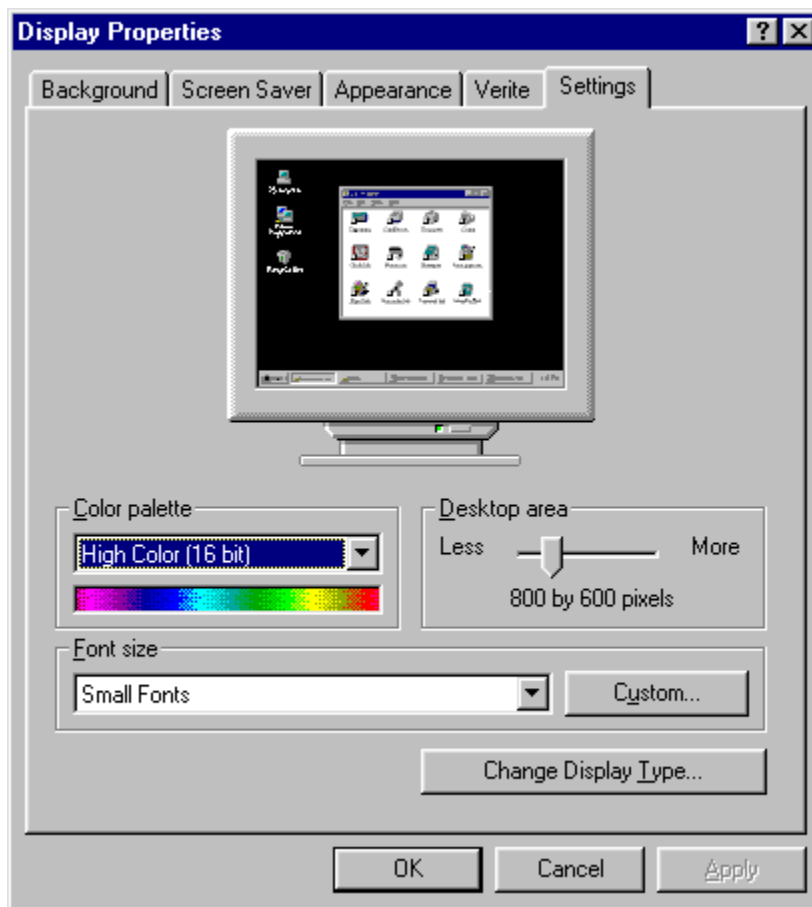
If you purchased your sound card before the release of Windows 95, you may obtain updated drivers from a variety of places. Most hardware retailers have access to the most recent drivers. Additionally, most sound card manufacturers maintain a BBS containing the latest drivers for free downloading. Drivers are also available on CompuServe, America Online, the Microsoft Network and other popular online services. A list of [sound card manufacturers](#) and their Technical Support and BBS numbers is available in this document. Please make every effort to install the latest Windows 95 sound drivers before calling [Activision Customer Support](#).

Color Settings

Mercenaries 3Dfx utilizes the Direct Draw libraries of Microsoft's DirectX. Some video cards do not yet have driver support for Direct Draw. Updated drivers are being developed by manufacturers to remedy this. To obtain information on these updates, contact your [video card manufacturer](#) and download their latest Windows 95 drivers for your video card. If you are not sure about your video card or its capabilities, please refer to the section called [Check Your Display Type Settings](#) for more information, or contact your [video card manufacturer](#).

To Change Your Color Setting:

You need to change the **Color palette** box of the window shown below to High Color (16 bit). To go to the Display Properties window to change it, [click here](#).



If you choose to make this change at some other time, you can always return to this Help file and try again, or follow the steps listed below to access these settings.

1. Place your mouse cursor over an empty area of your desktop and click the right button on your mouse. At the bottom of the list that appears, click on **Properties**. This will bring up the Display Properties window. You can also bring this window up by clicking on the **Display** icon in Control Panel.

2. Choose the **Settings** tab and change the color setting to High Color (16 bit) as shown in the **Color palette** box above.

If you have a video card that supports High Color (16 bit), but you cannot select this as an option, check to see that you have the most updated Windows 95 video driver.

Common 3D Video Card Problems when Playing in Windows 95

ATI RAGE II+

We suggest that you use the default settings in the "Video Options" menu of FOG/Off, TRANSLUCENCY/On FILTERING/ON, MIP-MAPPING/Off

Known Issues

1. Transparencies. If you encounter a horizon that you can see through (usually found in a night mission) or hot pink colors, this is due to a transparency bug with the ATI drivers.
2. FOG versus Translucency. ATI supports these features but not in simultaneous use. Turning these features both on will result in visual irregularities. We suggest you do not play the game with both on at the same time.
3. Mip-Mapping. Use of the feature will provide framerate increase, but will result in visual irregularities. We suggest you play the game with this feature turned off.
4. 400x300 video mode. Attempting to launch the game in this resolution mode will result in black flickering. Do not use this resolution setting.
5. Targeting box textures. Occasionally, the lower left targeting box on the HUD (heads up display) will display the ground texture.
6. Texture seams visible. Occasionally you may notice a blue or pink seam on the ground. This is a result of the video reporting incorrect texture coordinates.

DIAMOND MONSTER

Cannot launch into sim or Translucency colors are white. If you encounter this error, you do not have the latest drivers and must reinstall with updated drivers.

DIAMOND MONSTER 3DFX/ORCHID RIGHTEOUS 3DFX

Cannot launch into sim or Translucency colors are white. If you encounter this error, you do not have the latest drivers and must reinstall with updated drivers.

RENDITION VERITE

Despite the fact the Verite is considered a high-end card, it does not support MIP-Mapping. As a result, foreground textures make look a little jagged. Turn on the remaining video options for optimal results. All resolutions are supported, however, 1024x768 would be the highest recommended resolution.

STB/S3 VIRGE

There are no suggestions for this card.

POWER VR

There are no suggestions for this card.

Common Audio Problems when Playing in Windows 95

Half of the problems with sound cards are remedied by newer sound card drivers. This is highly recommended and is usually free and easy to do. You can contact your [Sound Card Manufacturer](#) for details.

I have a Media Vision Pro Audio Spectrum 16 and the sound is distorted. What should I do?

I have a Packard Bell with little and/or no sound when playing the Windows 95 version of *Mercenaries 3Dfx*. I need help!

Installing a new sound card.

I just installed a new sound card. How come I'm not getting any sound?

Checking Your Sound Card For Conflicting Settings.

I have only partial or no sound when running the game.

I have an Advanced Gravis UltraSound ACE and I am experiencing severe lock-up problems.

The volume levels of my music, sounds effects or game voices are too low for me to hear. What can I do?

Why is the sound fuzzy on my Sound Blaster Pro 2 sound card?

Can I listen to the *Mercenaries 3Dfx* soundtrack on my audio CD player?

I have a Diamond Telecommander sound/modem card and it does not work with the game. What do I do?

Common Input Device Problems when Playing in Windows 95

Joysticks and Gamepads:

[Joystick Not Working Properly](#)

[Customizing the Joystick Configuration](#)

[Joystick Calibration](#)

[Thrustmaster Products Supported By Mercenaries 3Dfx for Windows 95](#)

[Mouse](#)

[Virtual i-O glasses and Forte VFX-1 Headgear](#)

Common Installation Problems when Playing in Windows 95

I uninstalled *Mercenaries 3Dfx* and there is no option to re-install the game, (i.e. I can only choose play as a option) what should I do?

[Click here](#) if you have a NexGen Pentium compatible proccesor or [click here](#) if you have a Cyrix processor and you are receiving a warning message during the install process.

Common Tips & Troubleshooting for General Issues (Windows 95)

I uninstalled *Mercenaries 3Dfx* and there is no option to re-install the game, (i.e. I can only choose play as a option) what should I do?

My screen saver runs really slow when *Mercenaries 3Dfx* is running. What can I do about that?

The fonts on my game screen are too large and extend off the screen. Why is this happening?

Game Freezes or Crashes

Can I install *Mercenaries 3Dfx* to a hard drive that is compressed?

How do I optimize video performance?

Movies don't play properly.

Power Saver Functions

Running the game without a CD in the drive

Can I run *Mercenaries 3Dfx* under Windows 3.1, Windows NT or OS/2?

Ctrl-Alt-Del locks up my system.

How can I improve Performance?

Where do I go for Game Updates and/or Patches?

I want some cheat codes! Where do I go?

Common Troubleshooting Tips for the Windows 95 Version of *Mercenaries 3Dfx*

Activision thoroughly tests its games on a variety of systems before they are released, but it is virtually impossible to test on all combinations of software and hardware. Many of the issues you may encounter in Windows 95 are caused by device drivers for video cards, sound cards and CD-ROM drives that are not fully compatible with the Windows 95 operating system. The following troubleshooting tips are intended to assist you in solving some of the common issues that occur with the Windows 95 operating system and *Mercenaries 3Dfx*.

Installation - This will focus on basic problems that might occur during the installation process.

Autoplay - This is where to go if you are encountering problems with the title screen automatically appearing.

DirectX - This will explain the DirectX process and state general answers to frequently asked questions.

3D Video - Where to go if you are experiencing 3D video card related problems.

Video - Where to go if you are encountering video related problems.

Audio - Where to go if you are encountering audio related problems.

Input Devices - Where to go if you are encountering input device related problems (e.g. mouse, joystick, or gamepads).

General Issues - Commonly asked questions

Common Video Card Problems when Playing in Windows 95

Half of the problems with video cards are remedied by newer video card drivers. This is highly recommended and is usually free and easy to do. You can contact your Video Card Manufacturer for details.

[When I launch into a mission the screen goes black and freezes.](#)

[Why do I have wavy lines across my screen when I enter a mission?](#)

[Matrox Millennium error with DirectX 3](#)

[How do I set my display to High Color \(16 bit\)?](#)

The display is choppy when playing the game. What should I do?

[Video Driver Settings](#)

[I installed a new video card, and the game doesn't look right. What do I do?](#)

[Changing the standard Windows 95 cursors causes video corruption](#)

[I've installed the game, and DirectX setup completed correctly. When I launch *Mercenaries 3Dfx* from the title screen or from the taskbar, my screen stays blank and the game doesn't start. What should I do?](#)

[Game Graphics Are Faded or Strange in Appearance](#)

Credits

=====

Mercenaries 3Dfx Team

=====

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SPECIAL THANKS

Frank Evers and Bill Ferrer

=====
End Mercenaries 3Dfx Team
=====

=====Mercenaries 3D Edition=====

MECHWARRIOR 2: MERCENARIES
based upon the BattleTech Universe created by
FASA CORPORATION

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Daiva Venckus

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Mark Cooper

Faisal Qaisi

Tom Prengle

Mei Ang

Must be in Vegas....

=====End of Mercenaries 3D Edition=====

The First Circuit of Comstar

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SPECIAL THANKS

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Ctrl-Alt-Del Locks Up My System

Do not use the **Ctrl-Alt-Del** function to quit *Mercenaries 3Dfx*. Instead select **Quit** from the **Option** menu to exit the game.

Current BattleMech Description and Statistics

ASN-21 Assassin

Overview:

Many of the purchasing agents for the Star League's military branch seem to have overstepped their authority in the case of the Assassin BattleMech. Although a new light 'mech was not required in great numbers, lobbyists for Maltax Corporation managed to gain several key contracts for the production of this 'Mech. Despite all the politics involved, the Assassin turned out to be a successful 'Mech in combat. Its ample firepower, good armor protection, and speed have made it a popular model. Its mobility seems to be the key to its success in battle.

Stats:

Mass: 40 Tons
Chassis: Maltax 40
Power Plant: 280 VOX
Cruising Speed: 75.6 kph
Maximum Speed: 118.8 kph
Jump Jets: 100AFVTA
Jump Capacity: 210 m
Armor: Lox loft series 1
Armament:
 1 Martell Medium Laser
 1 Holly Long-Range Missile Rack
 1 Holly Short-Range Missile Rack
Manufacturer: Maltax Corporation
Communication System: Garret T15 B
Targeting and Tracking System: Garret 500S

AS7-D Atlas

Overview:

The sight of BattleMechs lumbering across the terrain is a familiar one among the worlds of the Inner Sphere. Nevertheless, the sight of an AS7-D Atlas still manages to make even experienced MechWarriors break out in a sweat and brings the bitter taste of bile to their mouths.

The Atlas was designed as a last-ditch attempt to ensure the superiority of the Star League's Regular Army over the growing armies of the House Lords. It was an understandable reaction to the Cameron edicts passed from 2751 to 2761 by the High Council, which permitted the five Lords to double the size of their personal armies. General Kerensky himself set down the specifications for the Atlas. He said that it should be "a 'Mech as powerful as possible, as impenetrable as possible, and as ugly and foreboding as conceivable, so that fear itself will be our ally."

Stats:

Mass: 100 Tons
Chassis: Foundation Type 10X
Power Plant: Vlar 300
Cruising Speed: 32.4 kph
Maximum Speed: 54.0 kph
Jump Jets: None
Jump Capacity: None

Armor: Durallex Special Heavy

Armament:

- 1 Class 20 Autocannon

- 1 LRM-20 Missile System

- 4 Medium Lasers

- 1 SRM-6 Missile System

Manufacturer: Na'ir, Hesperus, Quentin

Communication System: Army Comm. Class 5

Targeting and Tracking System: Army Comp. Type 29K

AWS-8Q Awesome

Overview:

The AWS-8Q Awesome is one of the most feared vehicles on the battlefields of the Succession Wars. First built in 2655 by the Technicron Manufacturing Conglomerate under license from the Star League, it soon became a popular heavy 'Mech in many regimental assault lances. Based on the design of the STR-2C Striker, the original assault 'Mech, the Awesome soon superseded that aging vehicle as the main heavy assault 'Mech in almost all the Successor States. The STR-2C Striker is almost never seen in front-line regiments today.

The Awesome is widely used as an initial penetration assault vehicle. Massed Awesome assault lances are sent to destroy a point in the enemy defenses, allowing units that follow to exploit the breach. The Awesome is also used in many defensive situations where it is usually responsible for the most threatened or important areas of a perimeter.

Stats:

Mass: 80 Tons

Chassis: Technicron Type G

Power Plant: Pitban 240

Cruising Speed: 35.4 kph

Maximum Speed: 51.2 kph

Jump Jets: None

- Jump Capacity: None

Armor: Durallex Heavy Special

Armament:

- 3 Kreuss Particle Projection Cannons

- 1 Diverse Optics Type 10 Small Laser

Manufacturer: Technicron Manufacturing

Communication System: Garret T19-G

Targeting and Tracking System: Dynatec 2780

CPLT-C1 Catapult

Overview:

The CPLT-C1 Catapult was produced by Hollis Incorporated in a limited production run between 2561 and 2563 under a special military contract with the Star League. It was officially classified as a close-support vehicle, designed as a second-line defense with strong offensive capabilities.

Early models of the Catapult were equipped with no close support weapons. But the most current versions carry four medium lasers for close support.

Stats:

Mass: 65 Tons
Chassis: Hollis Mark II
Power Plant: Magna 260
Cruising Speed: 43.2 kph
Maximum Speed: 64.8 kph
Jump Jets: Anderson Propulsion 21
Jump Capacity: 120 m
Armor: Durallex Heavy
Armament:
2 Holly LRM 15s
4 Martell Medium Lasers
Manufacturer: Hollis Incorporated
Communication System: O/P COM-211
Targeting and Tracking System: O/P 1078

CDA-2A Cicada

Overview:

Many small manufacturers entered the BattleMech industry as tensions mounted near the time of the fall of the Star League. In this period, HartfordCo, a known manufacturer of fine communications and targeting systems, began constructing 'Mechs from their home planet of Bryant near Earth. Their single contribution to battlefield technology was the Cicada, which went into limited production in 2840.

With Bergan Industries holding almost a total monopoly on the contracts for small recon 'Mechs, HartfordCo proposed a 'Mech heavier than the Locust made by Bergan. It would be armed with the well proven Magna laser systems, and be as fast as the Locust but weigh twice as much. Most important, the price was right. Star League took a limited contract for the Cicada, shipping it to replace many of the Locusts lost in border areas.

Stats:

Mass: 40 Tons
Chassis: Hartford 300
Power Plant: 320 Pitban
Cruising Speed: 86.4 kph
Maximum Speed: 129.6 kph
Jump Jets: None
Jump Capacity: None
Armor: 3/Star Slab
Armament:
2 Magna Medium Lasers
1 Magna 200 Small Laser
Manufacturer: HartfordCo
Communication System: Hartford J15 B
Targeting and Tracking System: Hartford S1000

CN9-A Centurion

Overview:

The Centurion was designed and built by Corean Enterprises as an operational partner for the highly successful Trebuchet. Produced from 2801 until the Corean plant on Ramen II was destroyed in 2845, it boasts a powerful Luxor medium-heavy autocannon and two Photech 806c medium lasers. For long-range hitting power, it has a chassis mounted Luxor 3R LRM-10. This cross-section of weaponry gives the

centurion a potential damage curve that increases steadily as it nears its target.

Unfortunately, many CN9-As have developed defects in their autocannon loading mechanisms. In many cases, it has been necessary to replace the entire loader. As replacement parts for the Luxor autocannon become increasingly rare, Techs often replace the entire autocannon with another make or decide to mount a different type of weapons system in its stead. No matter which alternative is chosen, it is an extremely complicated and time-consuming operation, as the Luxor system was custom-fit into the Centurion's chassis with no room left for modifications. Although the CN9 is a fine 'Mech when in good condition, the defective autocannons make its future uncertain. In the future, Centurions may adopt a variety of roles, depending which refits they receive.

Stats:

Mass: 50 Tons
Chassis: Corean Model K7
Power Plant: 200 Nissan
Cruising Speed: 43.2 kph
Maximum Speed: 64.8 kph
Jump Jets: None
Jump Capacity: None
Armor: StarGuard III
Armament:
1 Luxor D-Series Autocannon
1 Luxor 3R LRM-10
2 Photech 806c Medium Lasers
Manufacturer: Corean Enterprises
Communication System: Corean Transband-J9
Targeting and Tracking System: Corean B-Tech

CLNT-2-3T Clint

Overview:

Andoran Industries began construction of the CLNT-2-3T under the Star League Armaments Act of 2507, which law provided border areas with the latest in battlefield technology. The Andoran Industries project resulted in the construction of over 200 of this class. The original Clint prototypes mounted a heavier autocannon (Armstrong Buster Class) and carried more ammunition. However, the chassis of these models developed stress problems, and the armament was downgraded to its current configuration.

This 'Mech functioned as a recon 'Mech as well as a well-armed, lower-end medium 'Mech. Its history and combat performance shows that it served those purposes well.

Stats:

Mass: 40 Tons
Chassis: Andoran Model III
Power Plant: Pitban 240
Cruising Speed: 64.8 kph
Maximum Speed: 97.2 kph
Jump Jets: Andoran Model JJII
Jump Capacity: 180 m
Armor: Durallex Medium
Armament:
1 Armstrong Autocannon/5
2 Martell Medium Lasers
Manufacturer: Andoran Industries Ltd.

Communication System: Raldon R1
Targeting and Tracking System: Sloane 220 Lockover Systems

COM-2D Commando

Overview:

The Commando COM-2D was designed as an alternative to the more numerous Wasps and Stingers as a reconnaissance 'Mech. While not jump-capable, the Commando has far stronger weapons than either of the more famous scout 'Mechs.

Conceived by engineers at Coventry Defense during the last days of the Protectorate of Donegal, the first prototype Commando was tested in 2463 and carried a large laser on the right arm. Because of the sudden heat generated by the laser was breaking down the lubricants in the 'Mech's wrist and hand, the weapon was later replaced with an SRM four-rack.

The Commando was commissioned by the Protectorate of Donegal in 2466, then adopted by the entire Lyran Commonwealth after the Protectorate became part of it. Though Star League made many attempts to draft the Commando into its own forces, the Commonwealth managed, through clever stalling and subtle lying, to keep the design to themselves. That has proved a prudent move on the part of the Commonwealth.

Stats:

Mass: 25 Tons
Chassis: Coventry Metal Works
Power Plant: Omin 150
Cruising Speed: 64.8 kph
Maximum Speed: 97.2 kph
Jump Jets: None
Jump Capacity: None
Armor: Lexington Linked
Armament:

- 1 Shannon Six-Shooter Missile Pack
- 1 Coventry 4-Tube Missile System
- 1 Hesperus-B3M Medium Laser

Manufacturer: Coventry Defense Conglomerate
Communication System: TharHes Crystal Flower RG-2
Targeting and Tracking System: TharHes Star Shark

CRB-27 Crab

Overview:

The Crab has been well received in Kurita units since Comstar began supplying them to the Draconis Combine. The 'Mech performed well in the War of 3039, surprising Davion units with the weapons hidden inside its claws. In fact, House Kurita would probably make the Crab one of its standard designs if it had the factory to produce its own.

Stats:

Mass: 50 Tons
Chassis: Hollis Mark 1A
Power Plant: Magna 250

Cruising Speed: 54 kph
Maximum Speed: 86 kph
Jump Jets: None
Jump Capacity: None
Armor: Paulina Heavy Ferro-Fibrous
Armament:
2 RAMTech 1200 Large Lasers
1 Ceres Arms Medium Laser
1 ExoStar Small Laser
Manufacturer: Cosara Weaponries
Communication System: Garret T11-b
Targeting and Tracking System: Garret D2j

CP 10-Z Cyclops

Overview:

Stormvanger Assemblies first placed the CP 10-Z Cyclops into production in 2710. Designed as a heavy assault vehicle for use in assault lances, the Cyclops also proved a favorite among headquarters troops in higher-echelon formations. With its sophisticated holographic Tacticon B-2000 battle computer and its planet-wide communications capability, the heavy 'Mech proved highly useful in this role. Except when the Cyclops is part of an assault, tactical doctrine usually places it in the reserve, where it can coordinate and support the overall actions of the other BattleMechs in its command. At regimental level and higher, the commander's Cyclops is usually guarded by a headquarters lance and supporting units.

Though individual commanders have occasionally made personal modifications, the present-day Cyclops is virtually identical to the prototype coming off the assembly line in 2710.

Stats:

Mass: 90 Tons
Chassis: Stormvanger HV-7
Power Plant: Hermes 360
Cruising Speed: 42.1 kph
Maximum Speed: 61.8 kph
Jump Jets: None
Jump Capacity: None
Armor: Starshield Special
Armament:
2 Diverse Optics Type 20 Medium Lasers
1 Delta Dart Long Range Missile 10-Rack
1 Hovertec Short Range Missile Quad
1 Zeus-36, Mark III Autocannon
Manufacturer: Stormvanger Assemblies, Unlimited
Communication System: Olmstead 840 with SatNav Module
Targeting and Tracking System: Tacticon Tracer 280

DRG-1N Dragon

Overview:

In the first years of the Kerensky Protectorate, the lackluster performance of the aging SHD-1R Shadow Hawk against newer designs made apparent the need to replace it. In a major contest, the Luthien Armor Works submitted its Dragon design and promptly lost the contract to the upgraded Shadow Hawk, the 2H.

Amazed and angered, the owners of Luthien Armor Works went ahead with production of a slightly less powerful Dragon. This design carried a Class 2 Victory autocannon on its right arm instead of the more powerful Imperator-A. It was this Dragon design that House Kurita privately commissioned in 2754 as the basis for the Combine's private army until the dissolution of The Star League.

Stats:

Mass: 60 Tons
Chassis: Alshain Type 56-60H
Power Plant: Vlar 300
Cruising Speed: 54.0 kph
Maximum Speed: 86.4 kph
Jump Jets: None
Jump Capacity: None
Armor: Starshield
Armament:
 1 Telos DecaCluster LRM Missile System
 1 Imperator-A Autocannon
 2 Victory 23R Medium Lasers
Manufacturer: Luthien Armor Works
Communication System: Sipher CommSys 3
Targeting and Tracking System: Eagle Eye Sy10-10

HTM-27T Hatamoto-Chi

Overview:

The HTM-27T Hatamoto-Chi is one of the first BattleMechs fielded by the DCMS utilizing advanced construction materials, most notably an Endo Steel chassis. First deployed by the DCMS on An Ting in 3039, the Hatamoto-Chi is a major conversion of the Wells Technologies CGR-1A1. The modifications were so extensive that the 'Mech was given a new designation.

Externally, the Hatamoto-Chi is similar to its parent design, retaining the large shoulder assemblies and lacking a left hand, which give the machine its characteristic silhouette. The most obvious distinguishing characteristic of this class is the radiator fins mounted on the head.

Stats:

Mass: 80 Tons
Chassis: Earthwerks VOL Endo Steel
Power Plant: Pitban 320
Cruising Speed: 43 kph
Maximum Speed: 65 kph
Jump Jets: None
Jump Capacity: None
Armor: Mitchell Argon Ferro-Fibrous with CASE
Armament:
 2 Tiegart Particle Projection Cannons
 2 Bical-6 SRM Launchers
Manufacturer: Maltex Corporation
Communication System: Colmax 90
Targeting and Tracking System: Garret D2j

HNT-171 Hornet

Overview:

A design that has long been out of favor, the Hornet was one of the first 'Mechs to use recovered technology in the hope of improving its performance. The work was done at the high-security Kallon factory on the planet Talon in the Wernke system. The HTN-171 model has appeared in limited numbers in F-C units, mostly in the Sarna March.

The Federated Commonwealth version is far more effective than the old HNT-151. It incorporates the lighter Endo Steel Construction, combined with Ferro Fibrous armor and Cellular Ammunition Storage Equipment. The 171 carries a half-ton less armor than the 151 but has virtually the same amount of external protection and significantly more protection against an ammunition explosion.

The MainFire Point Defense Anti-Missile System gives the Hornet better defense against enemy missiles at the cost of a smaller laser. It remains to be seen, however, whether the improved Hornet will prove more valuable on the battlefield.

Stats:

Mass: 20 Tons
Chassis: Corean Model KL77 Endo Steel
Power Plant: Hermes 100
Cruising Speed: 54 kph
Maximum Speed: 86 kph
Jump Jets: Pitban LFT-50
Jump Capacity: 90 m
Armor: StarGuard CIV Ferro-Fibrous with CASE
Armament:
 1 Holly LRM 5
 1 Martell Medium Laser
 1 MainFire Point Defense Anti-Missile System
Manufacturer: Kallon Weapon Industries
Communication System: Tri-Word Duplex 4880
Targeting and Tracking System: Dalban HiRez II

HBK-4G Hunchback

Overview:

The HBK-4G Hunchback is a heavy-hitting fighting vehicle. Serving in medium and assault lances of many regiments of the Successor States, it has earned a distinguished fighting record. Designed in early 2572, the Hunchback continues as a popular vehicle both in House Liao and House Kurita regiments. It is also used extensively by House Marik armed forces.

The Hunchback is widely known for its streetfighting abilities in the confined spaces of urban battles. With its massive firepower at close range, it is more than a match for many heavier 'Mechs.

Stats:

Mass: 50 Tons
Chassis: Komiyaba Type VIII
Power Plant: Nissan 200
Cruising Speed: 43.9 kph
Maximum Speed: 63.5 kph
Jump Jets: None
Jump Capacity: None

Armor: Starshield

Armament:

1 Tomodzuru Autocannon Mount Type 20

2 Ichiba 2000 Medium Lasers

1 Diverse Optics Type 10 Small Laser

Manufacturer: Komiyaba/Nissan General Industries

Communication System: Sony MST-15

Targeting and Tracking System: Tacticon Tracer 300

JM6-S Jagermech

Overview:

Recognizing that the Rifleman was a good design that could be improved, the designers at Kallon Industries began reviewing the RFL-3N's original design in light of its battlefield performance. Three facts immediately came to light. The Rifleman was prone to overheating, it did not carry enough ammunition, and it was lightly armored in comparison with other 'Mechs of the same tonnage. Kallon designers reworked the blueprints, making a few trade-offs, and created a first-grade 'Mech - The Jagermech. Though still lightly armored for its weight, the Jagermech is less likely than the Rifleman to overheat, as the large lasers have been replaced with more ammunition and a pair of Mydron light autocannon.

Stats:

Mass: 65 Tons

Chassis: Kallon Type XII

Power Plant: 260 Magna

Cruising Speed: 43.2 kph

Maximum Speed: 64.8 kph

Jump Jets: None

Jump Capacity: None

Armor: Kallon Royalstar

Armament:

2 Mydron Model C Medium Autocannon

2 Mydron Model D Light Autocannon

2 Magna Mk. II Medium Lasers

Manufacturer: Kallon Industries

Communication System: Garret T11-A

Targeting and Tracking System: Garret D2j

JR7-D Jenner

Overview:

The Jenner is a relatively modern design, first constructed in 2784 by Diplan Mechyards of Ozawa under contract to House Kurita. It was designed as a fast, hit-and-run guerrilla fighter. With a maximum speed of 118.8 kilometers per hour and a jump capacity of 150 meters, it was hoped that this 'Mech would form the foundation for a new, highly mobile lance.

The original Jenners mounted two Argra 27C medium lasers and a Diplan HD large laser on a central turret, but this configuration could easily be disarmed by a direct hit to the turret. The medium lasers' targeting system was also plagued with problems. However, because the chassis and mobility sub-systems performed well in trials, designers decided to refit the weapons systems instead of crapping the whole design. The standard ten heat sinks allowed the 'Mech to move swiftly and fire without overheating.

The Jenner was then modified to its current configuration, mounting four Argra 3L medium lasers, two per side, on directionally variable mountings. The Argra 3L replaced the older 27C because it had a better spectral purity and a more rugged focal system.

The Thunderstroke SRM-4 was installed after additional testing showed the need for increased short-range firepower. The resulting 'Mech was the pride of Kurita forces. Designed and built at home, it was the optimum mix of speed, jump capacity, and firepower.

Stats:

Mass: 35 Tons
Chassis: Diplan Scout-A
Power Plant: 245 Magna
Cruising Speed: 75.6 kph
Maximum Speed: 118.8 kph
Jump Jets: Smithson Lifters
Jump Capacity: 150 meters
Armor: Starshield
Armament:
4 Argra 3L Medium Lasers
1 Thunderstroke SRM-4
Manufacturer: Diplan Mechyards
Communication System: Dawson III
Targeting and Tracking System: Bk-309

JVN-10N Javelin

Overview:

The JVN-10N Javelin is one of the newer recon vehicles used by the armies of the Successor States. First produced in 2751, the light 'Mech still had not been entirely integrated into many 'Mech regiments by the beginning of the First Succession War in 2786. Because of this, many combatants were caught off guard when it appeared on the battlefield. House Davion took a particular interest in the Javelin's development, introducing them into many recon lances. Today, after centuries of Succession Wars, the Javelin has come to be known as a reliable scout 'Mech.

The Javelin's main function is reconnaissance, though it is also used extensively in ambushes. In that regard, the term "sneaky as a Javelin" has become widespread among MechWarriors throughout the Inner Sphere.

Stats:

Mass: 30 Tons
Chassis: Duralyte 246
Power Plant: GM 180
Cruising Speed: 67.3 kph
Maximum Speed: 95.9 kph
Jump Jets: Rawlings 95
Jump Capacity: 180 m
Armor: Star Guard 1
Armament:
2 Arrowlite SRM 6 Racks
Manufacturer: Stormvanger Assemblies, Light Division
Communication System: Garret T10B
Targeting and Tracking System: Dynatec 128C

MAL-1R Mauler

Overview:

The Mauler is the Federated Commonwealth codename for a Kurita Assault 'Mech just beginning testing at the proving grounds of Luthien Armor Works. The Draconis Combine has high security surrounding this project, and all information is a combination of unconfirmed reports, speculation, and analysis.

Stats:

Mass: 90 Tons
Chassis: Alshain Class 101
Power Plant: Hermes 270 XL
Cruising Speed: 32.4 kph
Maximum Speed: 54.0 kph
Jump Jets: None
Jump Capacity: None
Armor: New Samarkand Royal Ferro-Fibrous with CASE
Armament:
 2 Victory Nickel Alloy Extended-Range Large Lasers
 2 Shigunga Long Range Missile 15-Racks
 4 Imperator Smoothie-2 Autocannon
Manufacturer: Luthien Armor Works
Communication System: Sipher Security Plus
Targeting and Tracking System: Matabushi Sentinel

ON1-K Orion

Overview:

The ON1-K Orion is an ancient BattleMech design. Created by the Terran Hegemony as the first truly heavy 'Mech, the Orion has acted as the brute force of major offensives for nearly 500 years. Even today, the Orion is still a formidable 'Mech.

The original design was created in response to the theft of BattleMech blueprints by commandos of the Lyrn Commonwealth. To ensure the continued dominance of the Hegemony's 'Mechs, engineers built the "Ultimate BattleMech". Commissioned in 2570, the Orion first saw action in the bloody Reunification Wars along the periphery. The original Orion, the 1-C, did not have long-range missiles, and sported a Class 5 autocannon instead of the Class 10 seen today.

Stats:

Mass: 75 Tons
Chassis: KaliYama Chassis
Power Plant: Vlar 300
Cruising Speed: 43.2 kph
Maximum Speed: 64.8 kph
Jump Jets: None
Jump Capacity: None
Armor: Valliant Lamellor
Armament:
 1 KaliYama Class 10 Autocannon
 1 KaliYama Death Bloom Missile System

2 I.W.W. Medium Lasers
1 I.W.W. Class 4 S.R. Missile System
Manufacturer: KaliYama Weapons Industries of Kalidasa
Communication System: Irian Orator-5K
Targeting and Tracking System: Wasat Aggresor Type 5

PNT-9R Panther

Overview:

Designed as a fire support vehicle for reconnaissance units, the prototype Panther was first built for Star League during the closing years of the Cameron Dynasty. After being commissioned in 2739 to produce the 'Mech, Alshain Weapons began immediate delivery of Panthers to League ground troops fighting renegade bandits along the Periphery.

The 'Mech's poor performance in the Battle of St. John pointed both a flaw and a strength in it. The flaw was that the large laser carried in the 'Mech's right hand lacked effective range and power. The strength was the 'Mech's basic hardiness. To improve this battleworthy machine's firepower, Star League engineers replaced the large laser with a PPC.

The Draconis Combine is the only Successor State that today uses the Panther in any significant numbers. The current model, 9R, is a compromise developed by Combine engineers. Though lacking the original panther's sophistication, its systems are more adaptable to present-day factories.

Stats:

Mass: 35 Tons
Chassis: Alshain 56-Carrier
Power Plant: Hermes 140
Cruising Speed: 43.2 kph
Maximum Speed: 64.8 kph
Jump Jets: Lexington Lifters
Jump Capacity: 120 m
Armor: Maxmillian 42
Armament:
1 Telos Four-Shot SRM Missile System
1 Lord's Light Particle Beam Weapon
Manufacturer: Alshain Weapons
Communication System: Sipher CommCon CSU-4
Targeting and Tracking System: Cat's Eyes 5

QKD-4G Quickdraw

Overview:

First produced in 2779, the QKD-4G Quickdraw was assigned to very few 'Mech regiments before the start of the Succession Wars in 2786. Since that time, however, it has slowly found its way into a number of units in all five of the Successor States. Though designed as the most likely replacement for the Rifleman support vehicle, the Quickdraw has never realized this aim and so remains less known than the older Rifleman design. Nevertheless, the Quickdraw's enormous firepower capacity and good armor protection quickly earned it the acceptance and respect of many MechWarriors.

Stats:

Mass: 60 Tons

Chassis: Technicron Type E
Power Plant: VOX 280
Cruising Speed: 42.1 kph
Maximum Speed: 66.7 kph
Jump Jets: Chilton 460
Jump Capacity: 150 m
Armor: Riese-475
Armament:
4 Omicron 4000 Medium Lasers
1 Delta Dart Long Range Missile Ten-Rack
1 Hovertec Short Range Missile Quad
Manufacturer: Technicron Manufacturing
Communication System: Garret T12E
Targeting and Tracking System: Dynatec 2180

RVN-3L Raven

Overview:

Two decades ago, the Raven was a House Liao experimental attempt to produce a 'Mech that could provide a battalion or regiment with sophisticated electronic-warfare capabilities. The equipment was not a complete success, both because it was too heavy and because it was not sophisticated enough to turn the tide of a battle. Recovered technology has changed all that. Produced only by Hellespont Industries on Sian, the Raven is striding off the assembly line bristling with the most advanced electronics ever seen in the Inner Sphere.

Stats:

Mass: 35 Tons
Chassis: Hellespont Type R
Power Plant: 210 XL
Cruising Speed: 64.8 kph
Maximum Speed: 90.7 kph
Jump Jets: None
Jump Capacity: None
Armor: Hellespont Lite Ferro-Fibrous with CASE
Armament:
1 Harpoon SRM-6 Launcher
2 Ceres Arms Medium Lasers
1 Apple Churchill Guiding Light Narc Beacon
Manufacturer: Hellespont Industries
Communication System: Ceres Metals Model 666
Targeting and Tracking System: Apple Churchill 2000

TBT-5N Trebuchet

Overview:

Corean Enterprises constructed the Trebuchet (or Trenchbucket) from 2780 to 2845 as a main-line medium 'Mech. With the long-range punch of its twin Zeus LRM-15s and the short range power of its three Magna Mk II medium lasers, the Trebuchet is a dangerous opponent at any range.

As it was never intended to operate far from its supply lines, the Trebuchet received only eight reloads for each of its missile racks. This limited ammunition supply can become a serious problem if the Trebuchet is trapped behind enemy lines.

Stats:

Mass: 50 Tons
Chassis: Corean Model 9C
Power Plant: 250 Magna
Cruising Speed: 54.0 kph
Maximum Speed: 86.4 kph
Jump Jets: None
 Jump Capacity: None
Armor: Starshield
Armament:
 2 Zeus LRM-15s
 3 Magna Mk II Medium Lasers
Manufacturer: Corean Enterprises
Communication System: Corean Transband-J9
Targeting and Tracking System: Corean B-Tech

STN-3M Sentinel

Overview:

The Sentinel, a Star League design that Comstar supplied to the Draconis Combine, fought its first battle in centuries during the Kurita counter-thrust at the Davion planet Exeter during the War of 3039. Along with the Crab, the Sentinel played a major role in the Combine's destruction of vast areas of the planet.

Stats:

Mass: 40 Tons
Chassis: Defiant V
Power Plant: Pitban 240
Cruising Speed: 65 kph
Maximum Speed: 97 kph
Jump Jets: None
 Jump Capacity: None
Armor: Valiant Lamellor
Armament:
 1 KWI AC/5 Ultra Autocannon
 1 Marklin Mini SRM-2 Launcher
 1 Magna Mk II Medium Laser
Manufacturer: Defiance Industries
Communication System: Starlink/Benicia Model AS829G
Targeting and Tracking System: Targa-7, Vid-Com-17

STK-3F Stalker

Overview:

The Stalker is the most famous and most common heavy assault 'Mech. A product of the Reunification War, the first prototype was produced as early as 2594. Early models were not very heavily armed, but field tests suggested that the STK would be most effective if it mounted weaponry with differing optimal ranges. Although the resulting 'Mech had far more weapons than could be safely fired in a single salvo, it had an extremely flexible response capacity. The League computer systems determined a target's range and suggested the optimum mix of weapons for the situation. The resulting fire control system was the best available. The STK represents BattleMech technology at its height.

Few Stalkers still retain the original computer equipment so vital to proper operation in battle. The STK is still a fearsome 'Mech, but with the loss of the computer, its pilots must be cautious not to overuse their tremendous firepower. The large quantity of waste heat generated by the lasers can quickly overheat the 'Mech despite its 20 heat sinks.

Stats:

Mass: 85 Tons
Chassis: Titan H1
Power Plant: 255 Strand
Cruising Speed: 32.4 kph
Maximum Speed: 54.0 kph
Jump Jets: None
Jump Capacity: None
Armor: Valliant Lamellor
Armament:
2 Jackson B5c LRM-10
2 Magna Mk. III Heavy Lasers
4 Magna Mk. II Medium Lasers
2 Thunderstroke SRM-6
Manufacturer: Triad Technologies
Communication System: Cronol PR
Targeting and Tracking System: Spar 3c Tight Band

UM-R60 Urbanmech

Overview:

Called upon to produce an effective light 'Mech for city-fighting, Orguss Industries replied with Urbanmech. Cheap to produce, but potent in its assigned duties, the 'Mech was manufactured in large numbers, many of which have survived into the present era. Now common in city garrisons and defensive units, the Urbanmech continues to be an effective battle weapon.

Stats:

Mass: 30 Tons
Chassis: Republic-R
Power Plant: Leenex 60
Cruising Speed: 21.6 kph
Maximum Speed: 32.4 kph
Jump Jets: Pitban 6000
Jump Capacity: 60m
Armor: Durallex Medium
Armament:
1 Imperator-B Autocannon
1 Harmon Light Laser
Manufacturer: Orguss Industries
Communication System: Dalban Interact
Targeting and Tracking System: Dalban Urban

VTR 9B Victor

Overview:

The VTR 9B Victor was originally built under a defense contract with the Star League in 2510. Defined as a heavy BattleMech, it was used as a strong support 'Mech with jump capabilities. Earlier models carried a sophisticated array of anti-infantry weapon systems, later discarded due to the overheating problems common for a heavily armed 'Mech. Also, technicians felt that this heavy-support 'Mech would not be engaging infantry, so the flamer and machine gun systems were removed. The Victor was originally outfitted with a Standus 20 tracking system, but it was removed from all but the first-run prototypes due to its tendency to project targets that didn't exist.

HildCo Interplanetary produced the 'Mech out of three plants whose facilities were destroyed during the First Succession War. Most of the firm's records fell into the hands of House Kurita, however. Thus, the total numbers of Victors produced has been determined to be nearly 1000. Many were lost during Kerensky's exodus from the Star League, and still more were lost during the First Succession War.

Stats:

Mass: 80 Tons

Chassis: HildCo Type V

Power Plant: 320 Pitban

Cruising Speed: 43.2 kph

Maximum Speed: 64.8 kph

Jump Jets: HildCo Model 12

Jump Capacity: 120 m

Armor: Durallex Heavy

Armament:

1 Pontiac 100 Autocannon/20

2 Sorenstein V Medium Lasers

1 Holly SRM 4

Manufacturer: HildCo Interplanetary

Communication System: Opus III Highbeam

Targeting and Tracking System: MaLandry 34

VND-1R Vindicator

Overview:

Much like the old joke about the camel, The VND-1R Vindicator is the product of compromise and not inspiration. As Capellan Confederation designers created this 'mech to fit as many roles as possible, it is capable of fire support, point defense, and offense, though only in lackluster fashion.

The First Succession War had proved disastrous for the Confederation, who lost all but one of its 'Mech-producing facilities. The remaining 'Mech plant, on the heavily industrialized planet of Capella, was limited to the production of 'Mechs of less than 60 tons. Also, because the Confederation had few materials to build 'Mechs, its engineers decided to build a 'Mech that was capable of several roles, yet could be built with meager resources.

The Vindicator was designed and built in 2826, during the lull between the First and Second Succession Wars. The first Vindicators had machine guns mounted on their left arms instead of the small laser seen on current models.

Stats:

Mass: 45 Tons

Chassis: Ceresplex IV

Power Plant: GM 180

Cruising Speed: 43.2 kph

Maximum Speed: 64.8 kph

Jump Jets: Anderson Propulsion 30
Jump Capacity: 121 m
Armor: Starshield
Armament:
 1 CeresArms Smasher PPC
 1 Sian/Ceres Jaguar LRM Missile System
 1 CeresArms Medium Laser
 1 Hessen Small Laser
Manufacturer: Ceres Metal Industries
Communication System: CeresCom Model 21-Rs
Targeting and Tracking System: C-Apple Churchill

WTH-1 Whitworth

Overview:

The Whitworth was first built in 2610 as a scout 'Mech intended to fill the gap between the light Wasp and the medium Phoenix Hawk. Whitworth's development program soon produced a well-armed, versatile vehicle. Although slower than other scout 'Mechs, the Whitworth made up for it with the protection given by its excellent Durallex Light armor.

The Whitworth was initially armed with Harpoon-6 SRM launchers. Star League defense planners replaced these with Longbow-10 LRMs on most models in an effort to discourage MechWarriors from engaging the Whitworth in close-range combat. Known to critics and admirers alike as the "Tin Woodsman", the Whitworth served throughout the Age of War and then in Star League scout units thereafter.

The Star League's death throes also brought the destruction of many Whitworths, serving as they did in heavy combat zones. Survivors were quickly recruited into the forces of the Noble houses that replaced the Star League, however. In the present Successor States era, Whitworths continue to serve their units well.

Stats:

Mass: 40 Tons
Chassis: Whitworth Type I
Power Plant: LTV 160
Cruising Speed: 43.2 kph
Maximum Speed: 64.8 kph
Jump Jets: Whitworth Jetlift
Jump Capacity: 120 m
Armor: Durallex Light
Armament:
 2 Longbow-10 LRM Launchers
 3 Intek Medium Lasers
Manufacturer: Whitworth Company
Communication System: Garret T14
Targeting and Tracking System: Garret D2j

WFT-1 Wolf Trap

Overview:

The Wolf Trap, the Federated Commonwealth codename for House Kurita's answer to the Wolfhound, is a rubric likely to stick, even though the Draconis Combine will doubtless give it some Japanese name.

This 'Mech has been on the drawing boards for years, only recently entering extensive field testing. One of the first completely new designs to emerge since the recovery of Star League technology, it will be a bellwether to see if other realms, such as the Free Worlds League and Capellan Confederation, rush to produce new designs instead of revamping old ones.

Stats:

Mass: 45 Tons
Chassis: Alshain Class 580 Endo Steel
Power Plant: Hermes 270 XL
Cruising Speed: 60.9 kph
Maximum Speed: 97.2 kph
Jump Jets: None
Jump Capacity: None
Armor: Durallex Special Medium with CASE
Armament:
 1 Imperator Code Red LB 10-X Autocannon
 2 Victory 23R Medium Lasers
 1 Shigunga Long Range Missile 10-Rack
Manufacturer: Luthein Armor Works
Communication System: Sipher Security Plus
Targeting and Tracking System: Eagle Eye 400 XX

ZEU-6S Zeus

Overview:

The heavy 'Mech ZEU-6S Zeus is the Lyrans Commonwealth's pride and joy. The initial design ideas were first put to paper just after the start of the war with the Draconis Combine in 2407. Three years later, when enemy forces were threatening Hesperus II, two Zeus prototypes were already lumbering across test terrains. The speed with which the Zeus was brought from idea to reality astounded even the most optimistic generals.

The Zeus also had the best field test a new 'Mech could hope for. When Kurita forces assaulted Hesperus II, the two Zeus prototypes were there, aiding in the defense of the vital BattleMech factories. These prototypes carried PPCs on their left arms. After the battle, the pilots reported that the PPC was extremely erratic and unreliable. Further research revealed that the PPC's insufficient shielding created wild magnetic interactions between it and the 'Mech's engine. The designers thus decided to drop the PPC in favor of the simpler autocannon to insure quick delivery of the 'Mech to the front. The autocannon gave the Zeus less punch but the same range as the PPC.

The Defiance factories on Hesperus II are the only ones currently producing the Zeus, which first came off the production lines in 2411.

Stats:

Mass: 80 Tons
Chassis: Chariot Type III
Power Plant: Pitban 320
Cruising Speed: 43.2 kph
Maximum Speed: 64.8 kph
Jump Jets: None
Jump Capacity: None
Armor: Valiant Lamellor
Armament:
 1 Thunderbolt A5M Large Laser

1 Coventry Star Fire LRM Missile System

1 Defiance Autocannon

2 Defiance B3M Medium Lasers

Manufacturer: Defiance Industries of Hesperus II

Communication System: TharHes Calliope ZE-2

Targeting and Tracking System: TharHes Ares-7

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Tim McMahon
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Services with Activision Forums, E-mail and File Library Support (available in English only):

America Online:	Use keyword "Activision" to locate the Activision forum
CompuServe:	76004,2122 or [GO GAMBUP]
Activision BBS:	310-255-2146 Up to 33,600 baud; Settings: 8 Bits, No Parity, 1 Stop Bit (8, N, 1)
E-mail:	support@activision.com
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You can contact UK Customer Service between the hours of 1:00pm and 5:00pm (UK Time) Monday through Friday.

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E-mail:	support@activision.com
World Wide Web:	http://www.activision.com

Customizing the Joystick Configuration

Due to the complexity of this page, we highly recommend that you print this topic and use it as a visual aid.

1. Go to the menu bar, select **Options** and choose **Cockpit Controls**.
 - a. From the list of Input Devices, select the devices that you wish to use by clicking on them until they turn red.
 - b. You may select any combination of <Keyboard>, <Mouse>, and/or <Joystick>.
2. Once the devices that you wish to use are displayed in red, click on **Custom Configuration**. Three new columns will appear as well as several commands used to load and save your custom configurations.

You may notice that most of the writing appears either in red, white or gray lettering.

- White lettering indicates an option is available.
- Red lettering indicates an option has been selected.

If you did not select a given device before clicking on **Custom Configuration**, that device will appear in gray lettering and

you will not be able to select it. To configure a gray device, click **Abort** and return to the beginning of these instructions.

3. To assign or reassign a command for a button, key or joystick, select the device from the Input Devices column by clicking on the device until it turns red.
4. Once you have selected (in red) the device you wish to change, look at the Game Controls list.
 - a. On the left, in gray, you will see a list of all the controls that the player may customize.
 - b. To the right of the first seven of these, you will also notice two white characters separated by a white slash. These white characters define the orientation of controls with opposed settings: positive/negative, right/left, up/down, or inside/outside.
 - c. Clicking on the white characters will reverse the controls; if <+> previously accelerated the 'Mech and <-> slowed it, <+> would now slow the 'Mech while <-> would accelerate it.
5. The next column to the right consists of either two white dashes or Ctrl, Shft, or Alt.

In the right-hand Game Controls column, you will see either four white dashes or a device name (key, mouse, msjstick, sidewndr, depending on which device has been selected) and an appropriate button, key, or movement.

These combinations of devices and keys create your custom controls. For example "Nearest Enemy Ctrl mouse MiddleBtn" means that pressing **Ctrl** and the middle mouse button will target the nearest enemy 'Mech.

You may wonder about the Primary Controls visible in white just to the right of the Game Controls heading. Because we know you may want to assign a control to more than one key, button or movement, we have provided four control screens, which are all active and all programmable. Feel

free to use any of the four screens.

To reassign commands on these screens:

1. Find the control you wish to assign and click on the white lettering to the right.

To the farthest right, you will notice a list of functions that correspond to the red Input Device that you have selected. This list is often completely gray (not available), but notice that the moment you select a Game Control, some of the options turn white and the Game Control turns red.

If you now click on one of the new white options of your input device, the red lettering in your Game Control columns transforms into the option that you selected. Repeating this, you can quickly configure your 'Mech to do exactly what you want.

- a. When you are satisfied, click on **Save Custom 1**. Now, if you exit and return to this screen, you will be able to recall your custom configuration by pressing **Load Custom 1**. If you do not save, when you return, your controls will have returned to the default settings and you will have no way to recall your custom settings without reconfiguring everything again.
- b. Click **Accept Config and Exit** and then **OK** to return to the game.

To name your custom configurations:

- a. On the left side of the screen, go to Current Config: (grey lettering)
- b. Below Current Config: is the title of your current configuration.
- c. Click on this title and press **Backspace** to remove the current title.
- d. Enter your new title for your configuration.
- e. Click **Accept Config and Exit** to save your title.

NOTE: You can have up to four configuration pages.

NOTE: Joystick maneuverability problems arise from the four configuration pages conflicting with one another. Commonly, the Turret L/R is configured by the user for the Thrustmaster L/R on the Flightstick, while the original settings are still active on the third and fourth pages of the default configuration. This causes a conflict in the controls where the turret and chassis are controlled by both the joystick and rudder pedals at the same time.

Cyrix

Unfortunately, the Cyrix processor is not recognized as a Pentium processor by Windows 95. When Windows 95 checks the hardware, it detects the processor as a 486. During installation, the installer checks for verification with Windows 95 that the correct processor type is available. Windows 95 reports to the installer that the processor is a 486. The solution to the problem is to continue the installation, by choosing the NEXT button. This will not degrade game performance.

Diamond Telecommander Sound/Modem Card

You will want to contact Diamond Multimedia and get a new driver for your Telecommander 2500XL/3500XL sound/modem card. The Telecommander update at the Digital and/or Diamond web site is NOT a Windows 95 driver. The only way to get the correct updated driver is to call [Diamond](#) and they will mail it to you. The version of the driver you need is 1.12 or higher.

After the new driver has been installed, reinstall the game. This should allow the game to run without crashes or sound problems.

Direct 3D

Direct 3D is the part of the Microsoft DirectX API (Application Programming Interface) set that allows a game to directly access the enhanced features of 3D graphics hardware under Windows 95. A game like *Mercenaries 3D* that supports Direct 3D will automatically detect and utilize the 3D graphics acceleration features of your computer's hardware, as long as your hardware supports Direct 3D and the correct device drivers are installed. This makes it easier for game companies and 3D acceleration card manufacturers to ensure their products will work together. Because Direct3D is relatively new, you should make sure your video drivers are the most up-to-date ones available from your hardware manufacturer to ensure compatibility.

DirectX 3

Upon completion of the *Mercenaries 3Dfx* setup, the install process will continue by determining if Microsoft DirectX 3 needs to be installed on your computer. If so, the Microsoft DirectX 3 setup program will install the appropriate files on your computer. If you choose not to install DirectX 3, and you find that later you need to install DirectX 3, follow these directions. With the disc in your CD-ROM drive, install Microsoft DirectX 3 by right-clicking on the *Mercenaries 3Dfx* CD icon to get the Context menu. From that menu, select Install DirectX.

Who makes DirectX and how can I contact them?

Microsoft created DirectX. If the answer to the question you are looking for is not found on this page you may want to contact Microsoft via mail at:

Microsoft Customer Sales and Service
One Microsoft Way
Redmond, WA 98052-6399, USA

Microsoft can also be reached in the USA at (800) 426-9400, or internationally at +1(206) 882-8080

What is DirectX and why do I need it?

Microsoft's DirectX 3 is an API (Application Programming Interface) set that increases the speed at which games play under the Windows 95 operating system. These APIs allow direct access to the enhanced features of hardware under Windows 95. With DirectX 3, a program has instant access to the hardware, allowing for great advances in graphics, sound, video, 3-D, and network capabilities of games.

Since Windows 95 and DirectX 3 are relatively new in the computer world and have not achieved compatibility with some older video cards, many manufacturers are releasing updated drivers for Windows 95 to meet the DirectX standard. If you are not sure about your video card's compatibility, consult the company that makes your video card.

If the Microsoft DirectX Installer does not detect DirectX 3 on your computer, it will install DirectX 3 for you. After installation is complete, you will need to restart your computer in order for DirectX 3 to take effect.

If you have other Windows 95 games on your computer, chances are you already have an earlier version of DirectX installed on your computer. In this case, the Microsoft Installer will write over that version with DirectX 3. At that point, the DirectX installation process will be complete. You will need to restart your computer for the changes to take effect.

If however, you already have DirectX 3 installed on your computer, the Microsoft DirectX 3 installer will detect that and not overwrite any DirectX 3 files. You will not need to restart your computer after installation in order to run *Mercenaries 3Dfx*.

DirectX 3 should not affect any titles designed for the original version of DirectX. Should you encounter difficulties with DirectX 3, please contact Microsoft for further information.

How do I check to see if my computer supports Direct X?

1. Place the game disc in the CD-ROM drive and exit from any autoplay screens.
2. Click on the START button and choose RUN.
3. Assuming D: as your CD-ROM drive, Type D:\DIRECTX\DXSETUP and press <Enter>.

If any of the components of DirectX are not certified please call your hardware manufacturer for the updated drivers that support DirectX.

I have heard DirectX is not compatible with some video cards. What can you tell me about that?

Windows 95 and DirectX are relatively new in the computer world and have not achieved compatibility with some older video cards. Many manufacturers are releasing updated drivers to meet the DirectX standard. If you are not sure about your video card's compatibility, consult the Vendor List for the company that makes your video card.

If I don't have DirectX will *Mercenaries 3D* for Windows 95 install it for me?

Yes. If the Microsoft DirectX Installer does not detect DirectX on your computer, it will install DirectX for you. After installation is complete, you will need to restart your computer in order for DirectX to take effect.

If the DirectX Installer copied over a previous version, will the UnInstaller remove DirectX 3? How will this affect my other Windows 95 games?

DirectX 3 will remain on your computer and you will be able to run other Windows 95 games that use Microsoft's DirectX libraries. DirectX 3 should not affect any titles designed for the original version of DirectX. Should you encounter difficulties with DirectX 3, please contact Microsoft for further information (address and phone number stated above).

How do I restore my video and/or audio drivers once DirectX has been installed?

1. Place the game disc in the CD-ROM drive and exit from any autoplay screens.
2. Click on the START button and choose RUN.
3. Assuming D: as your CD-ROM drive, type D:\DIRECTX\DXSETUP and press <Enter>.

Choose the button that satisfies your want (e.g. Restore Audio drivers). This process will install your past drivers and prompt you to restart windows.

Display

The resolutions available to you will depend on your overall system. Regardless of the resolution you choose, the detail of the background images will remain the same.

Try making the following changes to increase the game's performance (They will be found within Combat Variables):

Chunky Explosions:	Try turning these OFF.
Particles:	Try turning these OFF.
Shadows:	Try turning these OFF.
Multiple Light Sources:	Try turning these OFF.

Resolution:	Reduce to the next lower resolution.
-------------	--------------------------------------

Note: The resolution can only be changed in the shell prior to the fighting simulation.

PLEASE NOTE: For *Mercenaries 3Dfx* the following options are NOT configurable and will always remain ON:

- Object Textures
- Terrain Textures
- Display Detail
- Object Density

Implementing just some of the changes listed above should be sufficient to get the game running reasonably on any machine. Other options can be left ON, as their performance cost is low.

Electronically Registering the Windows 95 Version

There are three ways to access it for Windows 95:

1. Select **Register Now** during the installation process.
2. Insert the CD. From the *Mercenaries 3Dfx* title screen, click on **More**. Then, click on **Electronic Registration**.
3. Right-click on the **Mercenaries 3Dfx** icon with the disc in your CD-ROM drive and select **Electronic Registration** from the menu.

Game Controls

Launch Screen Controls

Move to Next Option	Tab
Select 'Mech	Left or Right Arrows
Select 'Mech Variant	[or]

Cockpit Weapon Controls

Fire	Spacebar
Select Weapon/Group	Enter
Chain-Fire/Group-Fire Toggle	\
Add Weapon to Group 1, 2, 3	Shift+1, 2, 3
Fire Group 1, 2, 3	Num Lock, /, * (Keypad)
Jettison Ammunition	K
Cycle Through All Targets	T
Previous Target	R
Target Nearest Enemy	E
Target Friendly (Squadmate)	F
Target Object Underneath Reticle	Q
Inspect Targeted Object	I
Targeting OFF	Ctrl+T
Enable Anti-Missile System	Ctrl+A
Alpha Strike	P

HUD System Controls

Cycle Through Multi-Function Display	F1
<i>Displays</i>	
Radar Display (Normal/Full Screen/Off)	F2
Wire-Frame Damage Display	F5
HTAL (Head/Torso/Arms/Legs)	F6
Armor Damage Report	F6
Enable/Disable/Customize HUD	F11
Save Customized HUD	Alt+F11
Cockpit On/Off	U
Objectives/Briefing Summary	F12
<i>Cameras</i>	
Target View	F4
Rear View	F7
Down View	F8
Weapon View	F9
Weapon View (After Launch)	F10

Mech Piloting

Direct Throttle (Stop to 100%)	1 to 0
Increase/Decrease Throttle	+/-
Steer Left and Right	Left and Right Arrows
Reverse Direction	Backspace
Torso Twist	< and >
Recenter Torso	/
Recenter Legs to Torso	M
Jump Jet (on applicable 'Mechs)	J
Jump Jet Steering and Turning	6-Key "Home" Keypad
Select NAV Point	N
Autopilot ON/OFF	A

MASC ON/OFF	V
Manual Shutdown/Restart	S
Override Automatic Thermal Shutdown	O
Pilot Ejection	Ctrl+Alt+E
Auto-Ejection ON/OFF	Ctrl+E
Self-Destruct	Ctrl+Alt+X
Command Starmates (MechWarrior 2 only)	Ctrl+F1 or B
Command Point 1, 2	Ctrl+F2, F3
Aerospace Attack	Alt+X

Pilot View Controls

Zoom In	Z
Zoom Out	Shift+Z
Reset Zoom Magnification	Ctrl+Z
Glance Left, Right	Keypad 7, 9
Pilot Eye Control	Ctrl+Arrows
Thermal Optics	L
Satellite Uplink ON/OFF	F3
Radar/Satellite Uplink Zoom In	X
Radar/Satellite Uplink Zoom Out	Shift+X
External Tracking Camera (XTC) ON/OFF	C
External Camera Controls	Ctrl+Arrows

Non-Game Controls

Options/Battle Parameters	Esc
Pause	Alt+P or Pause
Snap a Screenshot	Ctrl+P
Abort/Exit Mission	Ctrl+Q

Game Freezes or Crashes in Windows 95

1. Make sure your system has at least 16MB of RAM and a Pentium 166MHz processor. Trying to run the game on a lesser machine may result in hardware and performance difficulties. Also, people using slower machines should select a maximum installation of the game to enhance performance.
2. Make sure you have at least 10 MB of free disk space available for a Windows 95 virtual memory swapfile to exist. Less than 10 MB of space may cause random crashes.
3. Make sure that you have turned off all other programs on your computer when playing the game. To do this, try holding down the **Shift** key when you are starting Windows 95. This will prevent any programs that may be in your **Start** menu from loading, and should allow you the memory needed to run *Mercenaries 3Dfx*.
4. It is recommended that you restart your system after experiencing a crash. This helps to ensure that you will not experience any residual effects related to the crash.
5. Some systems employ Advanced Power Management features that shut off the display and/or parts of the system when they have been idle for a period of time. These features may conflict with the game, and in fact, may cause system crashes. We *highly* recommend that you turn these features off when playing the game.
6. Make sure your hard drive is not compressed.

Game Graphics are Faded or Strange in Appearance

1. Make sure your video card is 100% Windows 95-compatible. Using a non-Windows 95-compatible video card and drivers may result in display problems.
2. Make sure that you have closed all other programs on your computer when playing the game.
3. Make sure that your video driver supports High Color (16 bit) in your [Color Settings](#). *Mercenaries 3Dfx* for Windows 95 should be played in High Color (16 bit) for optimum performance.

If you purchased your video card before the release of Windows 95, you may obtain updated drivers from a variety of places. Most hardware retailers have access to the most recent drivers. Additionally, most video card manufacturers maintain a BBS containing the latest drivers for free downloading. Drivers are also available on CompuServe, America Online, The Microsoft Network and other popular online networks. A list of [video card manufacturers](#) and their Technical Support and BBS numbers is available in this document. Please make every effort to install the latest video drivers before calling [Activision Customer Support](#).

Game Tips

There is one mission I just can't beat. Is there any way to go past it?

Try this:

1. Before you launch the mission, go to *Options* on the menu bar and select *Combat Variables*. In *Combat Variables*, toggle from **hard** or **medium** mode to **easy**. You will find those enemy 'Mechs a lot easier to kill now. You can use this trick for specific missions or an entire career.

Why are my jump jets harder to maneuver in some missions?

The varying gravitational and atmospheric conditions of planets can either supplement or limit jump jet capabilities. For example, a planet with low gravity will enable a 'Mech to jump higher and farther than a planet with a high gravity; thin air will impair the efficiency of the jets, giving you less thrust; etc.

Should the Mercs3D\MEK\ directory be completely empty?

Yes. The \MEK directory is where user-created BattleMech files are stored. If you have not created any custom BattleMechs, this directory will be empty.

Game Updates and/or Patches

If it becomes necessary to update your game, you can find game updates on our web page at:

<http://www.activision.com>

If you are uncertain of a game update and/or patch, please E-mail all questions to our internet mailing address at:

support@activision.com

Game Walk Through

If you don't feel comfortable with going straight into battle, it may be smart for you to secure a training contract first. There is a unit of Hanson's Rough Riders who are often looking for inexperienced Mercs to back them up on some of their less dangerous contracts. (Plus there is a good chance of picking up some extra cash along the way.)

COMSTAR TERMINAL

To start with you will need to get to a ComStar terminal and sign in with the Guild. You're going to need to give them a call sign and a unit name. Think about them both, because once you have decided on the names, you cannot change them. The ComStar terminal will also be a place that you can check in with from time to time to find out what is going on in the Inner Sphere.

THE OFFICE

In the office you'll find your personal terminal. This terminal houses all the tools you need to manage your mercenary unit.

MERCENARY CONTRACT DATABASE

The contract database lists all of the campaigns that are currently available. Be careful in your contract selection: once you have chosen a contract, there is no way to back out of it. Pay close attention to the monetary reward for completing each contract. Lucrative contracts may look tempting, but with higher rewards come greater risks and longer durations.

PERSONNEL DATABASE

At any given time there will be a number of mercenaries available for hire. They have diverse backgrounds and skill levels, so be sure to read their profiles: you get what you pay for. After you've hired a mercenary, he or she will draw a monthly salary until you fire them (or they meet their death in battle).

INVENTORY

From your office terminal, you can keep tabs on your current stores of 'Mechs, weapons, and equipment. These things are accumulated through purchases or as salvaged bounty from missions.

FINANCES

Your monthly costs are reported in a short financial summary on your office computer. Note that the more 'Mechs you own, the more techs are required to maintain them.

THE 'MECH BAY

The starport at Outreach contains a reasonably well-equipped 'Mech Bay. In the 'Mech Bay, you'll find a terminal for managing your arsenal of 'Mechs and weaponry.

ARMS MERCHANT

When it comes time to stock up on weaponry, access the Arms Merchant. A wide variety of arms, munitions, and equipment can be found here. Technical advances are frequently made, so keep an eye out for new types of weapons and equipment.

If you signed on to a long contract, make sure that you have exact replacements for the items on your 'Mech. Everything that gets destroyed while on a mission has to be replaced from your inventory; there's no Arms Merchant on a dropship.

WEAPONS AND AMMO TIPS

Make certain that you buy extra weapons before you go on campaign missions (missions that will last for several months). These missions are often on distant worlds where you can't get access to a reputable arms-merchant. If weapons are destroyed, you won't be able to repair them unless you have spare

weapons on-hand in your inventory. Weapons stored in your arms are more likely to be targeted by enemy Mechwarriors and should be a priority when you are repurchasing extra weapons.

CONTRACTS

When deciding on a contract, always weigh the missions risk against the pay-off. Watch for salvage opportunities as well as the missions total pay.

Remember that missions that offer a substantial cash reward are probably difficult or risky missions, beware of any contract that seems too good to be true.

MECH FACTORY

If you find yourself in the enviable position of having excess C-bills, you'll want to trade in your current 'Mech for a more powerful one. The 'Mech factory will be more than happy to accommodate you, but be wary of the premium it will cost to repurchase your 'Mech. As with weaponry, there are frequently advances in 'Mech chassis design, so keep an eye out for new types of 'Mechs.

CUSTOMIZE

A large concern for many mercenaries is the cost of customizations. Since each 'Mech in the Inner Sphere is assembled to a particular specification, it is fairly expensive to make custom modifications. Choose your customizations carefully BEFORE making any transactions on the 'Mech Bay's computers to avoid wasting money and time with unnecessary work on your 'Mech.

PROCEDURES FOR CUSTOMIZING A BATTLEMECH

There are two basic considerations in balancing a BattleMech: (1) maximum weight and (2) critical space. Maximum weight is determined by the total allowable tonnage for the base chassis selected. Critical space refers to the critical slots in each section of a BattleMech designed to house weapons and 'Mech system components. The capacity of these areas is determined by the BattleMech's tonnage and a pre-allocated assignment of critical space to the base chassis, the main framework of each BattleMech. The available critical slots in each section of the base chassis determine the space in which to allocate the primary components of a 'Mech.

SELECTING AN ENGINE

Choose an engine for your BattleMech. Select "Engine" from the configuration summary to display the Engine screen. Select FASTER or SLOWER to scroll through the BattleMech engines available. Once you have determined the engine you will use in your BattleMech, click on the type of engine on the Engine screen to toggle between Std (Standard) or XL (Extra Light) engine technology. An XL-type engine weighs half as much as a standard engine of the same rating, but occupies additional critical slots in each side of a 'Mech's Torso.

MODIFY HEAT SINKS

Every BattleMech engine is equipped with heat sinks as standard equipment, but some 'Mechs will need additional heat sinks to effectively dissipate heat, depending on their weapons configuration. Select "Heat Sinks" on the configuration summary to display the Heat Sinks screen. A BattleMech may not carry a mix of normal and double heat sinks. To add more heat sinks simply use the "Add" key to add them to a particular location on your BattleMech. You may need to purchase additional heat sinks first. To upgrade to double heat sinks you have to buy an "Upgrade Package" available at the Arms Merchant. When you buy an upgrade package all of your heat sinks become double heat sinks and you will have to assign them to critical slots on your BattleMech. The total weight of the default heat sinks is included in the engine tonnage; extra heat sinks can be added at a weight cost per heat sink. The critical slots required for the total number of heat sinks added is determined by the 'Mech's engine rating.

DETERMINING JUMP CAPABILITY

BattleMechs may be equipped with jump jets in their Legs and/or Torsos to allow jump capability. Each jump jet gives a 'Mech additional jump capability.

DETERMINE INTERNAL STRUCTURE

The internal structure of a 'Mech can be constructed with standard or Endo Steel technology. To upgrade your BattleMechs internal structure you need to purchase an upgrade package from an Arms Merchant and then assign the Endo Steel criticals to slots on your BattleMech. Although using Endo Steel frees up tonnage that can be used to add weapons and armor, it requires more critical slots to be carried by a 'Mech.

MODIFY ARMOR

You can add armor to your 'Mech in half-ton increments and as much as your 'Mech's internal structure will allow. The armor factor is based on a 'Mech's armor type and tonnage. Select "Armor" from the "Equipment" section to display the Armor screen. You can add twice as much armor as internal structure to each area of a 'Mech's torso, arms and legs, and three times as much to a 'Mech's head. Select ADD or DELETE to modify your 'Mech with the desired armor. You will have to buy a Ferro Fibrous upgrade package if you wish to upgrade your BattleMechs armor from standard to Ferro Fibrous armor. For each ton of standard armor added, you are supplied with plates of armor which you can distribute to your 'Mech's structure.

Ferro-Fibrous armor increases the armor factor per ton, but occupies more critical slots in a 'Mech's internal structure. Once you determine the total tonnage of armor to add, you can distribute the selected number of plates of armor to the different sections in your BattleMech's internal structure.

The exact armor factor used to protect each area is left to your discretion. Use the 'Mech diagram on the Armor Allocation screen to select the section of the 'Mech to which you would like to add armor, then use the first set of arrows on the left to increase or decrease the amount of armor allocated to those areas. For areas to which armor can be allocated to front and back sections, use the second set of arrows to increase or decrease armor accordingly. The Armor Allocation screen will indicate the armor assigned to each section of the BattleMech.

ADD WEAPONS AND AMMUNITION

You can add up to fourteen weapons and as much ammo as your BattleMech's total tonnage and critical slots will support. Select one of the weapon buttons at the top of the screen to choose from a selection of weapons. Then review the Weapons Table on the right to determine which weapons are available for incorporation into your custom 'Mech. To add a weapon to your configuration, select the weapon you would like to add from the Weapons Table. Then, select ADD to add it to the 'Mech's configuration. The added weapon will then appear in your BattleMech. To delete a weapon, just select it on your BattleMech and select REMOVE to remove it from the configuration.

If the weapon you have added is an ammunition-based weapon (i.e., non-energy weapon), you can add or delete ammo in keeping with the base chassis's allowable tonnage and critical space. First select the AMMO button on the top of the screen. You will see a list of available ammunition. Choose the ammo you want, the section you want to add it to and hit the "Add" key.

ADD EQUIPMENT

Select "Equipment" on the configuration summary to display the Equipment screen. Each 'Mech is equipped with several mandatory equipment systems which are accounted for in the design of a BattleMech. Both mandatory and assignable equipment will appear on the Equipment screen to indicate which systems are included in your configuration. In addition to various actuators, the other type of equipment your 'Mech configuration can be equipped with is MASC to enable a 'Mech with the capability of short bursts of speed at the cost of heat build-up and increased stresses. Purchase MASC and then assign the necessary criticals that appear with the ADD button.

If you do decide to customize your 'Mech, there are some things you need to know. First of all, your 'Mech has a maximum tonnage. There is only so much weight that its chassis design will tolerate. Usually 'Mechs are sold fitted with equipment up to their maximum weight limit. You will have to remove weaponry and other equipment to free up some weight.

In the Customize section of the 'Mech Ops computer located in the 'Mech Bay, click on the part of your

'Mech that you would like to customize. Highlight the desired item for removal and click "remove". That's all you need to do; the rest is done by the 'Mech Bay technicians. To add new items, select the desired section of your 'Mech, like before. This time, select the exact weapon from the list on the right and click "add". You can cycle through the various categories of items to add using the row of buttons across the top of the screen.

REPAIR/RELOAD

Repairing a 'Mech is similar to customizing one, but it is both simpler and less expensive. You will need to repair your 'Mech after every mission, or else you will start the next mission with the damage you sustained in the previous one. Remember that you need to have the foresight to stock your inventory with exact replacement parts for the items on your 'Mech.

There are two ways of repairing. "Repair All" will let your personal technician know that he is to fix every single problem on your 'Mech. If he can't fix or replace something, he will let you know. Alternately, you can repair individual crits on your 'Mech by clicking on specific regions of the 'Mech diagram, clicking on a specific item in the list, and then clicking the "Repair" button.

The text for damaged crits is classified by color. Gray = normal, yellow = light damage, red = heavy damage or no replacement in inventory. If an item is red, that means you have no replacement for the item in your inventory; you will have to make do without this item until you have a chance to visit the Arms Merchant in the starport between campaigns.

DROPSHIPS

Since most starports are located in extremely secure areas, you will need a dropship to get you to and from missions. From most dropships, you should be able to repair and reload your 'Mech, access your inventory and financial databases, assign your starmates to their 'Mechs and review your current contract more thoroughly before going into the mission. The latter is done by accessing the mission computer.

Before any given mission you will have access to the mission briefing given to you by your current employer and any of your own personal notes on the situation. After a mission, when you are safely away from any danger zone, your employer will send you a debriefing on the situation and how you affected it. They will also give you the most recent news on the situation as told by ComStar.

If you ever feel that you are running low on supplies or armaments, you always have the option of aborting the mission without legal repercussions, but there is no guarantee that your reputation will fare as well. The best thing to do is to make sure that you are completely prepared for any set of missions that you are about to launch into.

When you get back to your starport always make sure to check your inventory, there is always the chance you were able to pick up some weapons off of destroyed 'Mechs that are still good. Plus some of the larger employers have been known to give damaged enemy 'Mechs to mercenaries as a bonus.

That should be enough to get you going. You're going to have to figure the rest out for yourself. Where you go with your career is entirely up to you, just remember that the Inner Sphere is in great discord and anything could happen at any time. Once again, good luck Mercenary.

General Troubleshooting for Joysticks and Game Pads

1. Make sure your joystick is properly calibrated in Windows 95. To do this, perform the following steps:
 - a. Click on the **START** button on your taskbar, Select **SETTINGS|CONTROL PANELS**.
 - b. Open the Windows 95 **CONTROL PANEL** folder and double-click the **JOYSTICK** icon.
 - c. Select the appropriate settings in the Current Joystick and Joystick Selection drop-down menus.
 - d. [Calibrate your controller.](#)
2. Although Windows 95 contains several built-in gamepad and joystick drivers, you may need to obtain a Windows 95-compatible driver from the gamepad or joystick manufacturer.
3. Be sure to connect your input device to the correct joystick port. If you are using a game card to run your joystick, be sure to disable the joystick port on your sound card. Please refer to your sound card manual for instructions on disabling the joystick port.
4. Make sure your joystick properties are setup for only one joystick. Please follow the steps below:
 - a. Click on the **START** button on your taskbar, Select **SETTINGS**
 - b. Select **CONTROL PANELS**.
 - c. Double-click the **JOYSTICK** icon.
 - d. Pull down the menu for **CURRENT JOYSTICK** and choose **JOYSTICK 2**. Make sure the Joystick selection down below changes to none. If it does not say none select it.
 - e. Click on the **APPLY** button.
 - f. Now, click on the **OK** button.

How can I improve Performance?

1. Close all other programs while playing.
2. Set Graphics Acceleration to maximum in your System Control Panel.
 - a. Go to the **Start** menu on your taskbar, Select **Settings|Control Panels**.
 - b. Double-click on the **System** icon.
 - c. Click on the **Performance** tab.
 - d. Double-click on the **Graphics** button.
 - e. In the Graphics box, position the Hardware Acceleration slider to **Full**.

How to Start the Windows 95 Version of the Game

After installing the game, insert the disc into the CD-ROM drive and wait for Windows 95 to display the AutoPlay title screen. If this screen does not appear, Choose the **START** button and select **PROGRAMS**. Click on **MERCENARIES 3DFX EDITION** and choose **MERCENARIES 3DFX**. Once the title screen appears click the **PLAY** button to launch Mercenaries 3Dfx.

I Uninstalled the Game and there is no Option to Reinstall it

Unfortunately the Windows 95 registry thinks the game is installed. You will want to delete it from the registry. You can do so by following these instructions:

1. Click on the **Start** button and choose **Run**.
2. Type in **REGEDIT** and then press <Enter>.
3. You should see the regedit screen, double click on **HKEY_LOCAL_MACHINE** folder.
4. Now double click on the **software** folder.
5. Double click on the **Activision** folder.
6. Right mouse click on the ***Mercenaries*** folder.
7. Choose the **delete** option on the pop up menu.
8. Confirm it by choosing the **YES** button.
9. Close the regedit application.
10. Put in the *Mercenaries 3Dfx* CD and you should have the option to reinstall now.

I have a Pro Audio Spectrum 16 and the sound is distorted. What should I do?

The game requires a 100% Sound Blaster 16 compatible sound card. Your sound card meets the requirement, but is not working as it should. Follow these instructions to allow your card to work in 16 bit mode:

- (1) Click on Start→Settings→Control Panel and double-click the Multimedia icon.
- (2) Make sure you are on the Audio tab.
- (3) Within the Playback section change the Preferred Device to "ProAudio Wave Out".
- (4) Click on the tab labeled Advanced.
- (5) Single-click the plus sign in front of "Audio Devices". This should expand the branch.
- (6) Single-click on the word "Audio for Sound Blaster Emulation" and click the Properties button.
- (7) Check-mark the boxes for "Do not use audio features on this device" and "Do not Map through this device".
- (8) Click the Apply button and restart your computer for the changes to take affect.

If you still encounter problems you should contact Media Vision for more assistance.

I have an Advanced Gravis UltraSound ACE and I am experiencing severe lock-up problems.

There have been some questions regarding the *Gravis UltraSound (GUS) ACE* operating in Windows 95. Please consult [Advanced Gravis](#) regarding updated drivers.

I have only partial or no sound when running the game.

1. Make sure your sound card is 100% Windows 95 Sound Blaster 16-compatible. Using a non-Windows 95-compatible sound card and drivers may result in sound problems. 8-bit sound cards are not supported.
2. Make sure your speakers are plugged in correctly and turned on. Also make sure the volume is set at an audible level.
3. During the game, right-click to bring up the Option menu and select **Adjust Volume**.
4. Your sound drivers for Windows 95 may require updating. Check the installation and setup parameters of your sound card using the Device Manager of Windows 95

If you purchased your sound card before the release of Windows 95, you may obtain updated drivers from a variety of places. Most hardware retailers have access to the most recent drivers. Additionally, most sound card manufacturers maintain a BBS containing the latest drivers for free downloading. Drivers are also available on CompuServe, America Online, The Microsoft Network and other popular online services. A list of [sound card manufacturers](#) and their Technical Support and BBS numbers is available in this document. Please make every effort to install the latest sound drivers before calling [Activision Customer Support](#).

Related Topics:

I have a Media Vision Pro Audio Spectrum 16 and the sound is distorted. What should I do?

I have a Packard Bell with little and/or no sound when playing the Windows 95 version of *Mercenaries 3Dfx*. I need help!

Why is the sound fuzzy on my Sound Blaster Pro 2 sound card?

I have a Diamond Telecommander sound/modem card and it does not work with the game. What do I do?

I installed a new video card, and the game doesn't look right. What do I do?

If you install a new video card into your system after you have installed *Mercenaries 3Dfx*, you may need to [uninstall](#) and [reinstall](#) the game in order to get it to properly recognize the new hardware. Be sure to uninstall using the uninstaller, other methods of deleting *Mercenarie 3D* may erase your saved games. Reinstalling *Mercenaries 3Dfx* will not affect your saved games. If you choose to reinstall to a new directory, you may have to move your old saved game files to the new directory.

I just installed a new sound card. How come I'm not getting any sound?

Be sure you are using a 100% Windows 95-compatible sound card capable of playing 16-bit digital audio. Sometimes Windows 95 fails to recognize your peripheral. If this happens, please consult your Windows 95 manual.

Some sound cards are advertised as 16-bit sound cards, while not really being capable of playing 16-bit sound. Many of these cards go into a 16-bit bus slot on your motherboard, yet only emulate Sound Blaster or Sound Blaster Pro 8-bit sound. Should you experience problems with your sound card, you may wish to review the documentation that came with it to verify that the card has 16-bit playback capability. If the card emulates a Sound Blaster 16, you should be able to run the game, but if it only emulates Sound Blaster or Sound Blaster Pro, then you will most likely experience sound errors.

Through our testing, we have found that many of the combination sound/modem cards that come in many consumer model PC's are not capable of playing back 16-bit digital audio. Please consult the manufacturer of your PC for more information.

I've installed the game, set up DirectX, but the game screen is blank.

This is a characteristic of having the incorrect video driver loaded. To correct this:

1. Go to the **Start** menu on your taskbar and select **Settings|Control Panels**.
2. Double-click on the **Display** icon, select the **Settings** tab.
3. Click on the **Change Display Type** button.
4. From the Change Display Type dialog box, confirm that the adapter type matches the card you have installed in your computer. If it is incorrect, click on the **Change** button.
5. In the Select Device dialog box, choose the correct video adapter. Click **OK**.
6. In certain cases, you will need to insert your original Windows 95 CD in order to load the appropriate driver.
7. After Windows 95 corrects your monitor settings, it will ask you to restart your computer. Click **Yes** and allow the computer to restart.
8. Upon completion of this process, [Uninstall](#) *Mercenaries 3Dfx* and then reinstall it.

IBM OS/2 (All Varieties)

Activision Studios does not currently test under or support IBM OS/2. Please see [Supported Operating Systems](#) for more information.

ISP: Internet Service Provider

Information for *Mercenaries 3Dfx*: The Windows 95 Version

Minimum System Requirements for the Windows 95 version

Installing *Mercenaries 3Dfx* for Windows 95 - This contains install instructions and information about this version.

Electronically Registering Your Copy of *Mercenaries 3Dfx* (Windows 95)

How to Start the Game - Basic instructions on how to begin playing the game.

Game Controls - Instructions on how to control your 'Merc.

Common Troubleshooting Tips - Where to go when you are having problems with the game.

Uninstalling the Windows 95 version of the game - Basic instructions on how to uninstall the game.

Installing A New Sound Card

If you install a new sound card into your system after you have installed *Mercenaries 3Dfx*, you may need to [uninstall](#) and reinstall the game in order to get it to properly recognize the new hardware. Be sure to uninstall using the uninstaller, other methods of deleting *Mercenaries 3Dfx* may erase your saved games. Reinstalling *Mercenaries 3Dfx* will not affect your saved games. If you choose to reinstall to a new directory, you may have to move your old saved game files to the new directory.

Installing *Mercenaries 3Dfx* for Windows 95

Before Installing

Please make sure your computer system is 100% Windows 95-compatible; *Mercenaries 3Dfx* for Windows 95 is not compatible with Windows 3.1.

To operate best, *Mercenaries 3Dfx* requires that your system have the latest Windows 95 32-bit drivers for your CD-ROM drive, sound card and video card. If you have any problems running the program, outdated drivers are the most likely cause.

If you need help obtaining the latest sound and video drivers, check out the [Vendor List](#). Press the **More** button on the *Mercenaries 3Dfx* title screen (which displays shortly after inserting the disc into your CD-ROM drive), then click the **Help** button. We have supplied a list of major computer hardware companies and their telephone numbers. You can find them listed under [Customer Support](#), under [Vendor List](#).

How to Install

1. Before installing, close all other applications. Also make sure Virtual Memory (located in your System Control Panel under Performance) is *not* disabled.
2. Insert *Mercenaries 3Dfx* disc into your CD-ROM drive and wait a few moments until the *Mercenaries 3Dfx* title screen appears. (If the title screen does not appear, please refer to the [AutoPlay Troubleshooting](#) section.)
3. Click the **Install** button to begin the installation process and follow the on-screen instructions.

NOTE: The game will play faster and smoother with the larger installs. *Mercenaries 3Dfx* can access game art and sound much faster from your hard drive than from your CD, so the more *Mercenaries 3Dfx* files installed on your hard drive, the quicker the game will play. This will be especially noticeable during transitional aspects of *Mercenaries 3Dfx*. Also, the sound will play back more evenly in many cases.
4. After *Mercenaries 3Dfx* installation is complete, your computer will install Microsoft's DirectX 3 drivers if you do not already have them. After installation of DirectX 3 is complete, you will need to restart your computer for the new drivers to take effect. For more information on DirectX 3, see the [DirectX 3](#) section of this file.
5. You can now run *Mercenaries 3Dfx for Windows 95* by choosing **Programs|Mercenaries** from the **Start** menu or by clicking **Play** on the *Mercenaries 3Dfx* title screen.

Introduction to Mercenaries 3Dfx

Welcome to *Mercenaries 3Dfx*. We hope you enjoy playing it as much as we have enjoyed creating it.

This supplemental documentation is designed as a troubleshooting guide. We will attempt to explain in detail the various tips, tricks and troubleshooting techniques we have learned through the course of our comprehensive testing process. *Mercenaries 3Dfx* uses state-of-the-art video compression and is subject to very specific needs in order to run on the average PC.

If you enjoy *Mercenaries 3Dfx* we would appreciate it if you would write to us - or write to your favorite games magazine and let them know. We appreciate both positive and constructive comments, since they help us to learn what you do and don't like!

One point we want to make before we proceed: you should read this Help file to understand the features and usage of *Mercenaries 3Dfx*. Many customers can save themselves both time and money by reading the information provided for possible solutions. We also recommend that users contact us via our online services for support rather than by telephone. Often, a solution to your difficulties is already available online which can be accessed and quickly downloaded. In addition, we can also provide more comprehensive and detailed assistance through our online services.

Joystick Calibration

1. Make sure it is securely plugged into the correct game card. If you have questions on how to do this, please see the documentation supplied with your sound and/or game card.
2. Use the Windows 95 joystick calibration program to make sure that your joystick is calibrated properly. To do this in the game, go to the Cockpit Controls screen and click on the Joystick Control Panel selection. This will open the Windows 95 Joystick Control Panel.

Outside the game, go to the Windows 95 Control Panel and click on the **Joystick** icon. Once you have reached the Joystick Control Panel, select the joystick you are using from the menu and select Calibrate to set it. Follow the steps and then exit the Control Panel.

3. If you do not see a **Joystick** icon in the Control Panel, make sure you have a driver installed. To do so, go to the Control Panel and select System. Select the Device Manager tab and click on the Plus Sign (+) next to Sound, Video and Game Controllers. Your joystick driver should be listed here. Click **Properties** to ensure that there are no conflicts. If you do not have a joystick driver installed, or you do not see a Plus Sign (+), follow these steps to install a joystick driver:
 - a. Go to the Start menu on your taskbar, Select Settings|Control Panels.
 - b. Double-click on the **Add New Hardware** icon and then click **Next**.
 - c. Select **No** and press **Next**.
 - d. From the list select Sound, Video and Game Controllers and press **Next**.
 - e. From Manufacturers select **Microsoft**, and from Models select **Gameport Joystick**, then click **Next**.
 - f. Follow the directions to complete the installation of your joystick driver.

Matrox Millennium error with DirectX 3

This card does not support Direct3D acceleration. You must disable this feature in within the DirectX setup menu. Please follow this instructions to do so:

1. Place the game disc in the CD-ROM drive and exit from any autoplay screens.
2. Click on the START button and choose RUN.
3. Assuming D: as your CD-ROM drive, type D:\DIRECTX\DXSETUP and press <Enter>.
4. Within the DirectX setup window you should disable (not have checked) Direct3D Hardware Acceleration Enabled

Minimum System Requirements for Windows 95 Version of MechWarrior 2: Mercenaries Enhanced 3Dfx Interactive Edition

- 100% IBM PC-compatible Pentium ® 166MHz computer
- Microsoft Windows ® 95 operating system
- 16 MB RAM
- 75 MB of uncompressed hard disk space
- Double-speed CD-ROM drive (300K/second sustained transfer rate)
- 16 bit High Color VESA local bus or PCI video card with 1 MB RAM
- 100% Microsoft-compatible mouse and driver
- Dedicated game card is highly recommended for joystick

The 3Dfx Edition of Mercenaries™ is compatible with the following 3-D card technologies

- Deltron RealVision Flash 3D
- Diamond Monster 3D
- Hercules Stingray 128/3D
- Orchid Righteous 3D

MercNet™ for MS-DOS Additional Requirements

One of the Following:

- Novell™ Network
- Novell-compatible IPX network
- 100% Hayes/MS-DOS-compatible modem (9600 bps for head-to-head play. 14,400 bps is recommended)
- Null-modem cable and serial port with 16550 UART
- Internet play: 14,400 bps modem, MS-DOS packet driver and Internet service provider

Supports any 100% Windows 95-compatible Input Device including (but not limited to): Microsoft Sidewinder Joystick; CH Flightstick Pro and Virtual Pilot; Gravis Analog Joystick; Analog Joystick Pro and Gamepad; Thrustmaster Flight Control System.

NOTE: A 100% Windows 95-compatible computer system (including compatible 32-bit drivers for CD-ROM drive, video card, sound card and input devices) is required.

NOTE: The Windows 95 version uses new Microsoft [DirectX 3](#) technology, and requires that your system have the most updated drivers that fully support DirectX.

Please Note: In order to play Mercenaries 3Dfx for Windows 95 the CD must be in your CD-ROM drive at all times.

Mercenaries 3Dfx may have trouble working with some 1993 or earlier Matsushita CD-ROM drives. These CD-ROM drives have trouble reading beyond 63 minutes on CDs, and *Mercenaries 3Dfx* uses the full CD. These drives were sold under the names of Panasonic, JVC, Reveal, Creative Labs and Plextor. Gameplay may occasionally slow down and the CD-ROM drive will be accessed constantly. We highly recommend that you upgrade to a newer CD-ROM drive to avoid problems with other programs in the future.

[Click here](#) if you have a NexGen Pentium compatible processor or [click here](#) if you have a Cyrix

processor and you are receiving a warning message during the install process.

Mouse

Animated Mouse Cursor

If you have added Microsoft Plus to your Windows 95 installation and you are using a custom animated pointer, it will cause video corruption as you move the mouse cursor over the videos in *Mercenaries 3Dfx*. To eliminate this problem, set your pointer back to the Windows 95 default pointer. Consult [Microsoft Help](#) for more information.

Systems with Wraparound Mouse Pointer Features

Some systems may have a mouse driver feature that allows the mouse cursor to "wrap around" the screen (e.g., when you move it off the right side of the screen it reappears on the left side). This feature may cause problems with the *Mercenaries 3Dfx* interface, and should be turned off before playing *Mercenaries 3Dfx*.

Movies Don't Play Properly

Make sure your system meets the [minimum requirements](#) for *Mercenaries 3Dfx*, especially your CD-ROM drive.

Too many other applications may be running. Close all other applications (especially DOS boxes) and try again. We strongly recommend that you do not run other applications while running *Mercenaries 3Dfx*.

My screen saver runs really slow when *Mercenaries 3Dfx* is running. What can I do about that?

Because *Mercenaries 3Dfx* makes heavy use of the system resources, screen savers may be affected in this manner. We highly recommend disabling your screen saver when playing *Mercenaries 3Dfx*. [Click here to open the Windows 95 Help procedure](#) to change your Screen Saver settings.

Nexgen

Unfortunately, the Nexgen processor is not recognized as a Pentium processor by Windows 95. When Windows 95 checks the hardware it detects the processor as a 386. During installation the installer checks for verification with Windows 95 that the correct processor type is available. Windows 95 reports to the installer that the processor is a 386. There are two alternatives that can be used to remedy this problem. They are as follows:

(The easiest solution)

Continue installation, by choosing the NEXT button. This will not degrade game performance.

Or

There is a file that will help the operating system identify the processor correctly. This is available from AMD, on their web site. (<http://www.amd.com>). These files will not improve game performance in any way. Before downloading and installing, please make sure you choose the correct file for your system.

If you are running a Nexgen processor with a VLB board download UPDTV30.EXE. If you are running a Nexgen processor with a PCI board download UPDTPI31.EXE. If problems persist contact AMD Technical Support Staff.

Optimizing Movie Performance

To optimize movie performance on your system:

1. Choose the System Properties dialog box by right-clicking on the **My Computer** icon and then clicking on **Properties**.
2. Choose the **Performance** tab in that dialog box
3. Click the **File System** button on that tab. This brings up the File System Properties dialog box.
4. Choose the **CD-ROM** tab in that dialog box.
5. Set the Supplemental Cache Size to **Large**.
6. Optimize Access Pattern for your appropriate type of CD-ROM drive.
7. Click on **OK** to accept your changes.

Packard Bell with Little or No Sound

If the game has no volume or it is too low you will want to use the mixer utility provided by Packard Bell. Please follow the instructions listed below for volume control settings.

1. From MS-DOS Mode or MS-DOS 6.22, type **CD\SOUND144\UTILITY** and press **Enter** (SOUND144 can be replaced with FORTE16 or SOUND16A depending on the sound card you have installed.)
2. Type **MIXTSR** and press **Enter**.
3. Hold down the **ALT** key while you press the **/** key. This will activate a menu with the following options:

TAB	Moves your selection choice to the next device to manage.
Right arrow	Turns the volumes up.
Left arrow	Turns the volumes down.
S	Save
E	Exit

Once you are finished choosing your settings in the volume control area follow the next two steps.

1. Start Microsoft Windows 95.
2. Begin game play as you normally would.

If problems persist, contact [Packard Bell](#).

Power Saver Functions

We have discovered through the course of testing *Mercenaries 3Dfx* that many computers equipped with a power saver feature in their system [CMOS](#) have problems running the game with this feature is turned on. This feature only activates after the computer is left idle for a certain period of time. To solve this problem, you should save your place in the game if you need to be away from the computer for a while. Another option is to turn this feature off in your system CMOS.

QA Test Team

The Activision Studios Quality Assurance Team June 1996

(The Best Team Money Can Buy!)



Front Row (left to right): Tony Villalobos, Jerry Suner, Abe Heward (and Bob), Rue Hon, Diki Stepanian, Kip Stolberg, Tim Vanlaw, Nadine Theuzillot, Matthew Paul, Jay Sosnicki, Giovanni Castello, Andy Peck.

Second Row: John Segreto, Todd Komesu, Indra Gunawan, Marc Turndorf, Jason Wong, Tanya Langston, William Stoughton, Gina Swanson, Fabian Trefero, Chris Strompolos, Lisa Labon, Jenny Park, Marty Stratton, Chris Crowder, Jimmie Hudson, Mitch Goldman, Eric Zala, David Ghys.

Back Row: Doug Jacobs, Mark Harwood, Robert Berger, Brian Diggs, Chuck Bonini, Wilton Taylor, David Osper, Curtis Shenton, Tom Wallick, Judith Chlipala, Jason Perry, Brian Jennings, Alvin Geter, Glenn Jost, Anthony Korotko, Walter Urteaga, Vincent Traber.

QEMM: Quarterdeck Expanded Memory Manager from Quarterdeck Corp.

RAM: Random Access Memory

Running the Game Without a CD

A *Mercenaries 3Dfx* CD must remain in the CD-ROM drive at all times in order to run *Mercenaries 3Dfx*. The game accesses files from the CD, so there is no way to play without a CD in the drive.

Supported Operating Systems

This version of *Mercenaries 3Dfx* supports Microsoft Windows 95. The following operating systems are not supported:

MS-DOS

[Microsoft Windows NT](#)

[IBM OS/2 \(All Varieties\)](#)

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[Introduction](#)

About the Game

[Windows® 95 Version](#)

TRI-M Mercenary Academy - Players Manual. [Click here for a walk through and detailed Merc' information.](#)

[Information for Mercenaries 3Dfx: The Windows 95 Version](#) - Look here for information regarding the Windows 95 version of the game.

[Information for MercNet: The MS-DOS Version](#) - All you need to know to get connected (MercNet available for DOS only).

[Vendor List](#) - A directory of hardware/software companies for compatibility issues.

[Activision Customer Support](#) - Information about our support services.

[Credits](#) - The folks who helped make this game.

NOTE: For your benefit, we have created a [Readme](#) document. This file contains last minute information about *Mercenaries 3Dfx* and *MercNet* which could not be included in this on-line help file. If information is not found within this on-line help file, please view our [Readme](#) document.

Taskbar Always on Top

In order to launch *Mercenaries 3Dfx*, the Windows 95 taskbar cannot have the option Always On Top selected.

For directions on how to turn this option off, please see the Microsoft Help system. [Click Here](#) to display the Microsoft Help system subject on Configuring the Taskbar.

The Fonts are too Large and are Extending off the Screen

Systems using a font manager, like Adobe Acrobat, installed to Windows 95, may have the game fonts appear larger than normal because the font manager will redirect Windows 95 to use the fonts it supplies. This will cause some text printing across the game window, and the text sometimes becomes unreadable. The general solution is to disable the font manager temporarily.

The volume levels of my music, sounds effects or game voices are too low for me to hear. What can I do?

Check your speakers to see if the volume can be turned up. This is the easiest solution. However, if this does not solve your problem, try adjusting the volume sliders in the Combat Variables menus of the game. Your sound card may have a volume or mixer utility that can raise the volume of your sound output. Finally, some sound card models have a volume knob in the back. Consult your sound card manual for more information.

Thrustmaster Products Supported By Mercenaries 3Dfx for Windows 95

Mercenaries 3Dfx for Windows 95 supports several configurations of the following Thrustmaster input devices:

- Flight Control Systems Mark I and II
- Weapons Control Systems Mark II vrs. 5.08
- Rudder Control Systems
- F-16 Flight Control Systems

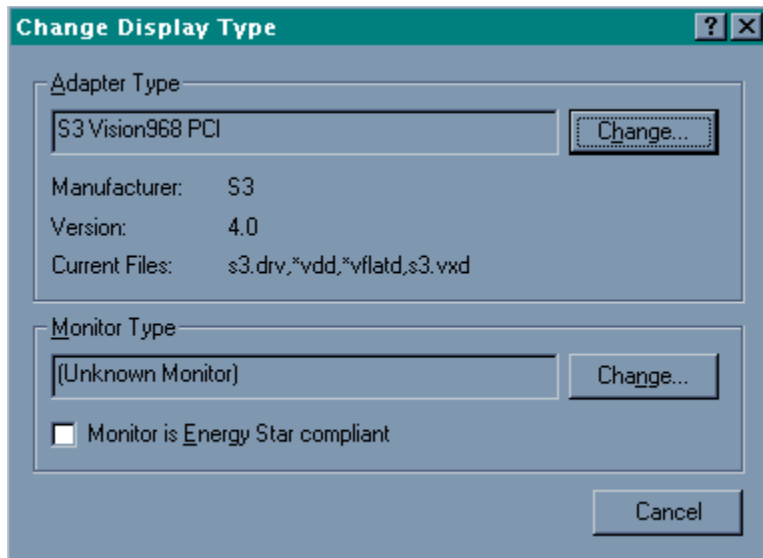
To Check Your Display Type Settings

If you are not sure of the type and capabilities of your video card, follow the steps below to find out what is currently in your system. Once you know what type of video card is in your system, please consult the [Vendor List](#) for the company that manufactures it.

1. Place your mouse cursor over an empty area of your desktop and click the right button on your mouse. At the bottom of the list that appears, click on **Properties**, and then choose the **Settings** tab. You can also bring this window up by clicking on the **Display** icon in the Control Panel, and choosing the **Settings** tab.
2. Click on the **Change Display Type** (if you have OSR/2 this reads "Advanced Properties") button.

Change Display Type...

3. Under Adapter type in the window that appears, make sure that the adapter type is appropriate for your video card.



4. If you are still having problems with your video card at this point, consult the manual for your video card or the [Vendor List](#) in this document for information on how to contact your video card manufacturer.

URL: Uniform Resource Locator. An addressing scheme used to link resources on the World Wide Web. Using URLs, a web browser can point to most resources on the net.

Uninstalling the Windows 95 Version of the Game

Below are some common questions and solutions regarding uninstalling.

Will the uninstaller remove the saved games?

All files with the file extension ***.SAV** will not be removed when you uninstall.

I tried to uninstall the game, but it left most of the files on the hard drive when I did it. Why?

If you install the game and then move the folder manually to another location the game's uninstaller will not be able to uninstall correctly. Please see the sections below for more details.

How to uninstall *Mercenaries 3Dfx*.

The Uninstall option in *Mercenaries* allows the game to remove itself completely from your hard drive. From the **Start** button go to **Programs/Mercenaries 3Dfx Edition/Uninstall** and follow the UnInstaller instructions.

NOTE: You should always uninstall the game with the UnInstaller provided.

If you remove the game from your hard drive by dragging your *Mercenaries 3Dfx* folder to the Recycle Bin, certain files may be left behind causing problems with a later reinstallation of the game. In order to completely remove all *Mercenaries* files from your computer, complete the following steps:

1. Make sure you have deleted the entire directory to which you installed *Mercenaries 3Dfx*.
2. Remove *Mercenaries* from the **Start** menu.
 - a. Go to the **Settings/Taskbar** from the **Start** menu.
 - b. Select the **Start Menu** and choose the **Programs** tab.
 - c. Click the **Remove** button.
 - d. Highlight and then delete the entire ***Mercenaries 3Dfx* Edition** entry.
3. You must also clean up the Windows 95 Registry, in order to be able to reinstall *Mercenaries 3Dfx* again.
 - a. Go to the **Start** menu on your taskbar, select **Run** and click.
 - b. In the Run dialog box, type **REGEDIT** and click on the **OK** button.
 - c. Once REGEDIT is open, select the entry called **HKEY_LOCAL MACHINE**.
 - d. Click on the key **SOFTWARE**. If you have any other Activision programs installed, open the Activision folder and delete only the ***Mercenaries 3Dfx*** folder. Otherwise, delete the entire item called **Activision**.

Removing Screen Shots and User Variants

If you have taken screen shots of your 'Merc battles (.GIF files) or created user variants for different 'Mercs, the Uninstaller will not remove these from your hard drive.

To remove User Variants:

'Mech configuration files are usually stored in *C:\Program Files\Activision\Mercs3Dfx\Mek*. Deleting the *Mek* folder will remove your user variants.

To remove Screen Shots:

Screen shots (.GIF) are saved in the *c:\Program Files\ Activision\Mercs3Dfx* folder. Delete any screen shots you may have taken from this folder.

VESA: Video Electronics Standards Association.

VLB: VESA Local Bus. A high-speed bus for graphics cards that provides better video performance on high-end machines.

Video Driver Settings

DirectDraw cannot function unless the correct video drivers for your video card are installed. In certain cases, Windows 95 will function correctly without the correct video drivers installed. As a result, it may be difficult for you to diagnose a video driver problem that is preventing *Mercenaries 3Dfx* from running. Always check that you have the correct video driver installed for your video card.

Virtual i-O Glasses and Forte VFX-1 Headgear

The release versions of the drivers for the Virtual I/O i-glasses have not been completed. As a 100%Windows 95-compatible device, Virtual I/O i-glasses will work with *Mercenaries 3Dfx* for Windows 95 once the new drivers are available. You can check their website at <http://www.vio.com> for the drivers availability.

Presently Forte VFX-1 Headgear is not compatible with Windows 95. Furthermore it will not support the resolution needed for the game. You can contact Forte Technologies via their web site at <http://www.fortevr.com>

Walk Through and Merc' Information

Psst! Hit the 'U' key during gameplay to turn off the cockpit! This will improve performance as well!

Game Walk Through

Weapon Information

BattleMech Components

Current BattleMech Description and Statistics

Weapon Information

COMSTAR ARCHIVE FILE: 66526-A456

Submitted by Primus Jack Mamais Terra

BATTLEMECH WEAPONS INFORMATION

Weapon	Heat	Damage	Range	Tons	Crits	Ammo/ton
ER Large Laser	12	8	570	5	2	Nil
ER PPC	15	10	690	7	3	Nil
Flamer	3	2	90	1	1	Nil
Large Laser	8	8	450	5	2	Nil
Medium Laser	3	5	270	1	1	Nil
Small Laser	1	3	90	.5	1	Nil
PPC	10	10	570	7	3	Nil
Pulse Laser (Large)	10	9	300	7	2	Nil
Pulse Laser (Medium)	4	6	180	2	1	Nil
Pulse Laser (Small)	2	3	90	1	1	Nil
Anti-Missile System	1	Nil	Nil	.5	1	12
Autocannon/2	1	2	720	6	1	45
Autocannon/5	1	5	570	8	4	20
Autocannon/10	3	10	450	12	7	10
Autocannon/20	7	20	360	14	10	5
Guass Rifle	1	15	660	15	7	8
LB 10-X AC	2	10	540	11	6	10
Machine Gun	0	2	90	.5	1	200
Ultra AC/5	1	5	600	9	5	20
LRM5	2	1/per	630	2	1	24
LRM10	4	1/per	630	5	2	12
LRM15	5	1/per	630	7	3	8
LRM20	6	1/per	630	10	5	6
Narc Missile Beacon	0	None	270	3	2	6
SRM 2	2	2/per	270	1	1	50
SRM 4	3	2/per	270	2	1	25
SRM 6	4	2/per	270	3	2	15
Streak SRM-2	2	2/per	270	1.5	1	50
Arrow IV System	10	20	2 km	15	15	5
CASE	0	0	Nil	.5	1	Nil
Heat Sink	-1	Nil	Nil	1	1	Nil
Double Heat Sink	-2	Nil	Nil	1	1	Nil

WEAPONS DESCRIPTIONS

Extended Range Lasers

The extended-range laser is an upgraded version of the basic laser with improvements that are obvious in its superior beam focusing and targeting equipment. The small extended-range laser is the lightest of all. It causes less damage than the large version and generates less heat. The medium version is heavier than the small version, but with more of the same advantages and drawbacks of the larger model. The large version of the ER laser has a significant increase in range and a damage potential that is slightly

higher than the basic model, at a cost of substantially more heat than the other versions.

Extended Range PPC

The Particle Projection Cannon fires high energy ion bolts which cause damage through both the impact and high temperature. Extended-range PPC is a significantly improved version of the particle projection cannon. This PPC is smaller, lighter and more powerful than the basic version with its longer range and harder punch. Heat buildup is also much higher and could be a critical disadvantage of employing this weapon.

Pulse Lasers

The pulse laser uses a rapid-cycling, high-energy pulse to generate multiple laser beams, creating an effect comparable to machine-gun fire. This characteristic improves each laser attack's hit probability with more damage per hit at the cost of increased heat and a somewhat shorter effective range. They too are available in small, medium and large versions.

Gauss Rifle

The Gauss rifle uses a series of magnets to propel a projectile through its barrel and towards a target. While requiring a great deal of power to operate, it generates very little heat and can achieve a muzzle velocity twice that of any conventional weapon. Gauss rifle ammunition consists of nickel-ferrous metal slugs. If Gauss ammunition takes a critical hit, there is no explosion, but the hit destroys the ammo-feed 'Mechanism rendering the rest of the ammunition in that location useless. A critical hit on the Gauss rifle itself destroys the capacitors that power this weapon. Such destruction causes a catastrophic discharge of the capacitor's stored energy with results similar to an ammunition explosion. If a Gauss rifle takes a critical hit, it causes an ammunition explosion in the location containing the rifle.

LB-X Autocannon

The LB-X autocannon makes use of light, heat-dissipating alloys to reduce weight and heat buildup. The reduced space and weight requirement of the LB-X autocannon allows this weapon to mount more sophisticated fire-control systems.

In addition to these advantages, the LB-X autocannon can use special cluster munitions that act much like an anti-BattleMech shotgun in combat. When fired, the ammunition fragments into several smaller submunitions. This improves the chances of scoring a hit and striking a critical location, but reduces overall damage by spreading hits all over the target area rather than concentrating on one location. The 5X autocannon causes five times as much damage as the common model, and the 20X causes 20 times more damage than the common model.

Machine Gun

The machine gun is a rapid-fire weapon. It is one of the lightest, yet powerful weapons a BattleMech can carry. The sheer volume of machine gun rounds which can be shot at close range increases the probability of scoring a hit, but does not cause severe damage to its target.

Ultra Autocannon

The ultra autocannon features a short, smooth-bore barrel, a modified breech mechanism, a rapid-feed reloader and specially designed ammunition. The AC/5 version causes five times more damage than the common model. The ultra AC/10 causes ten times the damage and more heat build-up, while the largest version causes 20 times the damage.

Short-Range Missiles

Short-range missiles are specially designed to fire at close range. Although the SRM-2 missile fires only two missiles at once, it can cause more damage than a missile in the long range missile group. The SRM-4 fires four missiles at once and the SRM-6 version delivers six missiles in one powerful shot.

Streak Short-Range Missiles

These short-range missile launchers are linked to a computerized fire-control system which handles target acquisition. Once the computer obtains a target lock, the streak missile will automatically home in

on its target. The sure-hit SRM-2 fires two missiles at once while the SRM-4 blasts four missiles worth of firepower. The SRM-6 tops the streak missile family with a six-pack blast of guided bliss.

Long-Range Missiles

The long-range missile is a specialized weapon designed to make contact with its target at long range through the use of its guidance system. The LRM-5 sends off a five-pack of missiles at once. The LRM-10 fires off ten missiles with one blast. The LRM-15 fires off a 15-pack of missiles and the LRM-20 leads this family of missiles with a 20-pack of pure missile power. Its indirect hits have been known to be as effective as its direct hits due to area-effect explosions known as "splash damage." LRMs won't "lock" at distances under 75M.

When I launch into a mission the screen goes black and freezes.

We have found this to be the case when you do not have DirectX certification. In most cases you can fix this problem by updating your video card drivers. This is highly recommended and is usually free and easy to do. You can contact your Video Card Manufacturer for details.

Where do I go for Game Hints?

We do not give out hints via Customer Support. Please call our US Hint line at (900) 680-4468 (\$0.95/min) or in Canada at (900) 451-4849 (\$1.25/min). You must be 18 years or older, or have a parent's permission to call. Touch-tone only. Prices subject to change without notice.

Why do I have wavy lines across my screen when I enter a mission?

We have found this to be the case when outdated DirectX drivers are present on a system. This can be fixed by updating your video card drivers. This is highly recommended and is usually free and easy to do. You can contact your Video Card Manufacturer for details.

Why is the sound fuzzy on my Sound Blaster Pro 2 sound card?

This may be due to a compatibility problem between the Sound Blaster Pro 2 and certain video cards. We discovered it with an [Orchid](#) Kelvin card installed. A small amount of distortion plays near the beginning and end of sound effects. We have no solution for it at this moment.

Windows NT

Mercenaries 3Dfx has not been tested on this operating system therefore it is not supported.

