

DECISIVE BATTLES OF THE CIVIL WAR

Strategic Studies Group (SSG)

CONSTRUCTION KIT MANUAL

1. INTRODUCTION

The following notes are meant as a guide to WarPlan. The information they contain will also provide some insights into how the game works, and should be read at some stage even if you never construct your own scenarios.

Varying an existing scenario is fairly straight-forward and the easiest way to get the most out of your game. All of the scenarios in the game come with suggested variations which can be easily implemented. However, designing an original scenario will require a reasonable degree of familiarity with the game itself.

We publish complete scenarios for the Decisive Battles Game System in our magazine Run 5. The magazine contains all the information required to create entirely new games using WarPlan and WarPaint. For details on Run 5 magazine, please contact Strategic Studies Group (SSG).

2. USING THE DESIGN MENUS

The data card contains a schematic display of the design menus. They operate in the same way as the Game Menus that you have already used.

You cannot make changes to the historical scenarios themselves; rather you must save the scenario onto a save game disk and then edit the data. This is to prevent you from accidentally corrupting the historical scenarios. Nor can you edit a game in progress. Only scenarios with a game turn number of zero may be edited.

3. PREPARING A DISK

Whether making a variation to an historical scenario or creating an original scenario, the procedure for preparing a save game disk is essentially the same. Examine the Start and Design menus. If you have not formatted a Decisive Battles save game disk, prepare one using the procedure given in Chapter 3 of the Game Routines.

When making a change to an historical scenario, select the <CREATE> line from Menu A and type (RET) to obtain Menu B. If the template which is providing the source for the variation is on a scenario disk, select the <SCENARIO> line and type (RET). Select the chosen scenario from Menu C. The computer will automatically process you through to Menu J (Create Master). If the template which is providing the source for the variation is on a save game disk, select the <DISK> line and type (RET).

Load the chosen file from Menu D. The computer will automatically process you through to Menu J (Create Master). Use WarPlan and WarPaint to make whatever changes you wish to the data and then come back to Menu J. Select the <DISK> line to go to Menu D. Select the <SAVE> line. Locate the desired save location in the catalog with the arrow keys and then type (RET). You will be offered an opportunity to enter a comment. Use it if you wish, otherwise select the <SAVE GAME> line and type (RET). IBM users can store scenario and save games in the same catalog. Thus, there is no Menu D in the IBM routines. When you wish to create an original scenario, repeat the above procedure but before entering data use the <CLEAR> line in Menu J to erase the data bases.

4. THE WARPLAN DESIGN MENUS

This section describes the various menus in WarPlan together with explanations of their functions. The order in which they are presented represents a convenient sequence for the creation of a new scenario. Once you completed your new scenario, we suggest you run it through in <OBSERVE> mode several times to fine tune the game balance. To assist with this process, type Cntl (F) at any time to enter the fast resolution mode.

(a). MAP DATA (Menu 5)

(i). Map Size/Info (Menu 6)

The map size in Decisive Battles is variable. Each map element is 9 hexes wide by 9 hexes deep. There may be up to three elements across and three down. Thus, the maximum size of a battlefield is 27 by 27 hexes. At a suggested ground scale of 300-500 yards per hex, this represents an area somewhere between 20 and 60 square miles.

In creating a scenario, map size must be set before anything else. Select the smallest map size that can comfortably support the action you wish to represent. Apart from being less work, smaller maps will mean faster games.

The top left sector should always be set to 0. Set the bottom right sector variable to the appropriate value. To make a 9 x 9 grid (i.e. a 1 sector map), set the bottom right sector variable to 0!

IBM users can choose colours for river, coast-line and map-edge hex-sides. Road and cursor colours are also selectable.

(ii). Define Terrain (Menu 7)

There are thirty-two (32) terrain shapes in Decisive Battles. Each shape can be completely redrawn using our powerful WarPaint graphics editor. The names and sighting, movement, cover and fortification effects of each terrain type are defined here. It

is possible to represent the ground conditions of any battlefield by judicious use of names and effects. Use the (RET) key to advance the cursor through the screen.

Examine any (or all) of the game scenarios and the blank design form in Appendix A.

For each terrain shape you wish to use, enter a 1-11 character name.

The sighting value represents the ease of visibility into and through the hex. A value of 0 specifies that there is no impediment to visibility; i.e. the hex is easy to see through. A value of 15 specifies that the line of sight is completely blocked. Values of 8-15 will create super dense terrain and may result in adjacent units being unable to see each other.

The movement value of a hex specifies how many movement points each unit must expend when traversing it. Units in column formation will pay only 1 MP when using visible roads no matter what terrain type is underneath. Hidden roads do not affect the movement value of a hex. Note that terrain types with an MP value of 0 prohibit entry for any unit.

The terrain symbol along the top of the screen corresponds to the line currently being edited by the cursor.

The cover value of a hex measures the extent of natural protection from enemy attack provided by the terrain type. This does not include any man-made structures. A value of 0 specifies that there is little or no protection afforded to units occupying the hex. A value of 7 indicates tremendous protection. Note that brigades defending hexes with high natural cover values may have more difficulty in bringing fire to bear on the enemy than a brigade in more open terrain. Assaults launched from heavily covered hexes are less effective than assaults from open ground. There is a balance to be struck. Brigades assaulting from open terrain will suffer more severely than brigades assaulting from heavily covered terrain.

The fortification value measures the extent of man-made rifle pits, breastworks and basic field defences in a given hex type.

We have allowed the use of 31 hex types to ensure there are enough to construct detailed field defences. A value of 7 specifies the extensive development of field defences. A value of 0 specifies none. A separate entry should be used for North and South fortifications.

By examining the terrain data bases in each of the historical scenarios, you can quickly see how to implement these values in your own designs. Field defence construction became an ever more important battlefield tactic to both sides as the war progressed.

The Confederacy, particularly, excelled in the preparation of complex and deadly entrenchments.

In many instances, you will note several hex shapes with the same name and effect values. The large number of hex types available has allowed us to customise terrain features to produce a more aesthetically pleasing battlefield.

(iii). Map Create Utility (Menu 8)

It's probably a good idea to make a draft version of your battlefield before completing the rest of the map data. However, we strongly advise you not to edit the map screen until all the information in Menus 6 and 7 has been compiled and entered into the program. IBM users should read the note at the end of this section.

A 9 x 9 hex section of the map will appear with a white, hollow, flashing cursor. In the top right of the screen you will find the hex co-ordinate of the cursor's current location. In the bottom right of the screen you will see the terrain name, the icon corresponding to the name, the relative position of the cursor in relation to the whole map and the icon identifying the side which controls the hex. If the hex has been defined as an objective, the name appears immediately above the terrain name.

There are 32 terrain types which can be entered. River, bridge and ford hex-sides can be entered. Roads can be added to a hex. Every hex must be identified as North or South controlled.

The I,J,K,M and 1-6 keys will move the cursor around the battlefield. Type (0) centre the screen on the cursor.

IBM users can use the f1 - f9 function keys to select sequential 9x9 sectors of the map; i.e. f1 selects the top left sector, f9 selects the bottom right sector.

To create a terrain type in a hex, type (T)(n) where n = a number between 0 and 31. Please see the blank terrain effects chart in Appendix A. Note that terrain types T1-T3 require you to type (T)(n) (SPACE). This is to distinguish them from double digit terrain types which use 1-3 as the first number. Terrain types T0 and T1(SPACE) are water hexes. T0 cannot be entered by any units. T1(SPACE) can be entered by all units and is therefore suitable as a bridge, ferry, ford or pontoon link across a wide body of water. Terrain types T2(SPACE)-T31 can be entered by all unit types and it is these types which make up the land component of the battlefield.

The road structure needs some explanation. There are two types of roads; functional roads and cosmetic roads. Functional roads are those used by the movement routines to march columns of men long distances. Cosmetic roads are those which end in dead ends, the map edge or anywhere which could confuse the computer. Use a cosmetic road if you don't want the computer to treat the hex as a road when moving troops in column or determining march routes. Units using either type of road pay 1 MP per road hex entered. To

add a functional road to a hex, type (R) while the cursor is over the hex. Type (R) again to remove the road. To add a cosmetic road to a hex, type (C) while the cursor is over the hex. Type (C) again to remove the cosmetic road.

Functional roads are one of two types; normal or hidden. Type (R) (X) to specify a hidden road. The road icon is masked by the terrain icon and any units using the road will pay the movement value of the terrain in the hex.

The movement routines will nonetheless use hidden roads as though they were normal roads when determining march routes and column movement. This technique is suited for picking out a track through dense terrain where placing a normal road would confer too great an advantage on the user. Type (X) again to convert the hidden road back to a normal road.

To create a river hex-side, you must type three keys. The first is (S). This identifies a hex-side. The second is a number between 1 and 3. This identifies north, north-eastern and south-eastern hex-sides respectively. Note that the south hex-side of one hex is the north hex-side of the hex directly below it. In this way, all 6 hex-sides can be edited. The third is a number between 1 and 3. (1) identifies a river. (2) identifies a bridge. (3) identifies a ford.

Type (S0) to clear all hex-sides from a particular hex. Rivers cannot be crossed except at fords or bridges. The presence of small streams can be accounted for in the terrain types.

Unlike our previous design kits, cities are created by using the terrain types; they are not a separate flag.

To set control of a hex to North or South, type (RET) to bring up the map menu and select <SET NORTH> or <SET SOUTH> as appropriate. All hexes, except T0s, will have their terrain icon replaced by the North or South control icon. As the cursor moves, it will leave a trail of the appropriate control icons behind it.

To change control, type (RET) to bring up the map menu and select <RESET ALL>. You are back at square one and can repeat the procedure using the other control icon. When editing hex control from scratch, the default value is South.

For convenience, you can set the cursor to automatically produce a terrain shape. With the cursor flashing on the chosen terrain, type (RET). This brings up the map menu on the right of the screen. Selecting <SET SHAPE> from this menu will lock the current terrain shape to the cursor. You may now move the cursor and the selected shape will be created wherever the cursor is moved. Type (RET) again to go back to the menu and select <RESET ALL> to turn off the shape.

We suggest you keep the map size as small as possible for your first original scenario.

All maps are compromises between the actuality of the terrain and its representation. Do not feel afraid to be creative with terrain to make the map work properly within the game system.

Important Note for IBM Users. If your IBM supports an EGA or VGA card and you have a colour monitor, you will be able to use our "full-map" graphics. There are a few changes you need to be aware of when you are building a new map. There are up to 250 full map icons which can be used to create the map. However, there are still only 32 different terrain types. In other words, the new graphics are purely an overlay covering the basic terrain shapes. What you must do is first create a map using the basic graphics (i.e. go to DOS and re-enter the program, disabling the "full-map" graphics). For example, the Decisive Battles Vol I game is usually started with the command db1. To start up without the "full map" graphics, use the command db1 f.

Build up the map using the standard graphics and save as normal. Return to DOS and restart with the "full-map" graphics enabled. You can now go to the WarPaint routines and prepare brilliant, 16 colour terrain shapes and unit icons.

These icons are stored in a .lbm file and are DPAINT2 (c Electronic Arts) compatible. Note that when you place these full-map hexes on the map, the original terrain type and name will remain in the lower right of the screen.

Finally. Issue 14 of our Run 5 magazine contains an extensive article on the use of "full map" graphics.

(b). UNIT DATA (Menu 9)

(i). Limits (Menu 10)

The limits menu is used to divide the available unit blanks between the North and South. Select <FORCES> and by typing the (RET) key repeatedly you will see there are three values to be entered.

There are a maximum of 15 Corps which may be created. When you type a number into the <CORPS> line you are allocating the available Corps between the North and South. The South is allocated a number of Corps equal to 1 less than the number entered. For example, if you type (8) the South will be allowed a maximum of 7 Corps. This number appears in the <max> column of the Southern Corps line.

The procedure for allocating divisions and brigades is identical. For example, a value of 19 in the division line would mean that the Rebs could use a maximum of 18 divisions, the Union 21. We have chosen this way of unit allocation so that we can produce the largest possible force pool in the smallest amount of memory. Note that the value range displayed to the left of the North forces shows the current, legitimate range for each entry.

(ii). Weapons (Menu 13)

Examine the blank weapons roster in Appendix A. If the scenario you are preparing is set in the American Civil War, then the weapons roster used in all of the historical scenarios should be more than adequate. Otherwise, you will have to make your own. There are 31 possible weapon types you may use. These must be divided between artillery types and small arms types. You will have already used Menu 10 (Define Limits) to select the number of each type you require.

Artillery

To create an artillery type, complete the following steps.

I.D. Enter a 1-11 character name to identify the artillery type.

RANGE. Enter a value between 0 and 5. This is the effective range, measured in hexes, of the artillery type. For example, in a scenario where the ground scale is 500 yards/hex, a 6pd smoothbore would have an effective range of 2 hexes.

RATE OF FIRE. Enter a value between 0 and 7. This value measures the reliability, ease of use and rate of fire of a gun.

EFFECTIVENESS. Enter a value between 0 and 7. This value measures the performance of the gun at close range; i.e. the effectiveness of its fire into an adjacent hex.

PENETRATION. Enter a value between 0 and 7. This value measures the fall-off in performance as the range of the gun increases. A value of 0 means that the gun has little effect beyond the first hex. A value of 7 means that the gun retains much of its effectiveness at its maximum range.

Small Arms

To create a small arms type, complete the following steps.

I.D. Enter a 1-11 character name to identify the small arms type.

RANGE. Enter a value of 0 or 1. A value of 0 indicates that the small arms type is primarily for melee use. A value of 1 indicates that the small arms type is primarily a projectile weapon. Troops armed with both melee and projectile weapons should be assigned a value corresponding to their primary type.

FIRE EFFECT. Enter a value between 0 and 7. This value is a quantitative measure of the firepower delivered by the small arms type.

MELEE EFFECT. Enter a value between 0 and 7. This value is a quantitative measure of the melee performance of the small arms type.

For example, Civil War cavalymen used firearms for skirmishing but switched to sabres on the occasion of a charge. The fire effect of the pistol should be 1 or 2 while the melee effect of a sabre in the hands of a mounted cavalryman should be 5 or 6. However, Civil War cavalymen were not primarily employed in a charging role so the range should be set at 1.

(iii). Forces (Menus 11)

Examine the blank force rosters in Appendix A. One of these should be prepared for each formation in the game. Do not attempt to edit the screen until these rosters have been completed.

The most important thing to note about troop creation in the Decisive Battles System is that there is no fixed organisational structure. For example, brigades may be attached to divisions, or corps, or even directly to the Army HQ. Such a flexible structure is the best way to reflect the operational employment of troops in the nineteenth century.

Army HQs

COMMANDER. Enter a 1-11 character name to identify the commander of the Army.

SECOND IC. Enter a 1-11 character name to identify the second in command of the Army. This variable should only be used where a second in command was officially appointed such as Beauregard at Shiloh. A 2IC will reduce the adverse effects of a C-in-C casualty.

HQ I.D. Enter one or two 1-11 character names to identify the Army.

LOCATION. Enter the x, y map co-ordinates of the Army HQ's start or arrival hex.

ARRIVAL. Enter a number between 0 and 95. This is the turn that the Army HQ will arrive on the map. An arrival number of 0 means the HQ begins the game deployed on the map. A human player will have no control over his subordinates until the Army HQ appears on the map.

OFFENCE #1. Enter a value between 0 and 23. A value of 0 specifies that there is no offensive objective; any other value identifies the chosen objective. Only enemy controlled objectives should be chosen.

OFFENCE #2. Enter a value between 0 and 23. As above. A computer Army commander will attempt to capture the first objective before moving on to the second objective.

DEFENCE #1. Enter a value between 0 and 23. A value of 0 specifies that there is no defensive objective; any other value identifies the chosen objective. Friendly controlled objectives must be chosen.

DEFENCE #2. Enter a value between 0 and 23. As above. A computer Army commander will defend both objectives, giving preference, if necessary, to the first defensive objective.

HQ MOVEMENT. Enter a value between 0 and 15. It is the number of movement points the Army HQ has available each turn to move over the map. The value should reflect the vigour shown by the Army's commander throughout the battle. The value should also be related to the movement allowances of other troops and to the terrain

effects. In general, an Army HQ should have a higher movement allowance than a Corps HQ.

STAFF. Enter a value between 0 and 7. This value is a subjective evaluation of the amount of preparation the Army HQ has done for the battle. Factors which are included in this rating are battlefield familiarity (recon), extent and detail of the briefings given to subordinates, staff experience and the overall confidence of the army in its commander.

STRENGTH. Enter a value between 0 and 7. This value simply describes the size of the provost guard accompanying the Army HQ. The units are 100s of men. It is not suitable for offensive use.

LEADERSHIP. Enter a value between 0 and 7. This value is only used when the computer is placed in command of an Army. Human commanders must rely upon their own judgement and intuition when issuing orders to subordinates. You can expect a much tougher battle from a commander with a high leadership value than from a lowly rated duffer.

Corps HQs

ARMY HQ I.D. Enter 1-9 character name to identify the Corps or its commander.

LOCATION. Enter the x, y map co-ordinates of the Corps HQ's start or arrival hex.

CORPS TYPE. Enter a value of 0 or 1. A value of 0 specifies an infantry corps; a value of 1 specifies a cavalry corps.

ARRIVAL. Enter a number between 0 and 95. This is the turn that the Corps HQ will arrive on the map. An arrival number of 0 means the HQ begins the game deployed on the map. You will not be able to issue commands to the subordinates of a particular corps until that corps' HQ has entered the map. Brigades belonging to a Corps not yet on the map may be directed by the Army commander provided they are within the four hex immediate command range.

ORDERS. Enter a number between 0 and 2. 0 = offensive, 1 = defensive, 2 = reserve. A Corps formation must have an offensive order to move on an enemy controlled objective or to issue such an objective to a division HQ under its control. A Corps with an offensive order may select two objectives, the first defines the route of march to the final destination.

A Corps with a defensive order may move, or issue such an order to a subordinate division HQ, only to a friendly controlled objective. Only one objective can be given to a corps with a defensive order. A Corps with a reserve order will hold in place, awaiting further orders. A Corps with a reserve order will not pay any attention to an objective. Note that the Army commander can change these orders as soon as the Corps HQ comes within communication range. The primary function of these orders is to make sure that newly arriving troops do not mill about aimlessly

but move sensibly into battle.

OBJECTIVE #1. Enter a value between 0 and 23. A value of 0 specifies no objective; any other value identifies a particular objective. The previous paragraph describes their purpose.

OBJECTIVE #2. Enter a value between 0 and 23. As above.

HQ MOVEMENT. Enter a value between 0 and 15. It is the number of movement points the Corps HQ has available each turn to move over the map. The value should reflect the vigour shown by the Corps' commander throughout the battle. The value should also be related to the movement allowances of other troops and to the terrain effects. In general, Corps HQs should have more MPs than subordinate brigades of the same type.

DAILY COMMITMENT. This value is used only by computer army commanders. For any particular day of a battle, a corps commander can be specified as being completely out of communication. The army commander will not be able to issue orders to the corps commander. An example of where this feature is used is the Chattanooga scenario. Thomas, one of Grant's corps commanders, is a very capable officer. However, on the first day of the battle, Grant wanted Thomas to remain on the defensive while Sherman's and Hooker's troops moved into position. For a human commander, implementing this plan is no problem. For the computer, it's not so easy. The Union is on the offensive on the first day and thus the first time a computer controlled Grant gets in contact with Thomas, he will be given an offensive command. By using this value to put Thomas out of communication with Grant on the first day of the battle, the computer can properly implement Grant's historical plan. Enter 0 if this feature is not to be used by the corps. Enter 1 if the corps is to be isolated on the first day only, enter 2 if the corps is to be isolated on the second day only, enter 3 if the corps is to be isolated on the first and second days only, enter 4 if the corps is to be isolated on the third day only, enter 5 if the corps is to be isolated on the first and third days only... etc; i.e day 1 = 1, day 2 = 2, day 3 = 4 and day 4 = 8. If the corps is to be isolated for more than one day, add the value for those days together.

LEADERSHIP. Enter a value between 0 and 7. This value measures the experience, confidence and determination of the Corps commander. It is especially important when the Corps HQ is not in communication with its Army HQ and must rely on its own initiative to get things moving.

STAFF. Enter a value between 0 and 7. This value is a subjective evaluation of the amount of preparation the Corps HQ and its commander have done for the battle. Factors which are included in this rating are battlefield familiarity (recon), extent and detail of the briefings given to subordinates, staff experience

and the overall confidence of the corps in its commander. These are the same criteria used to rate the Army staff values.

STRENGTH. Enter a value between 0 and 7. This value simply describes the size of the provost guard accompanying the Corps HQ. The units are 100s of men. It is not suitable for offensive use.

LIKELIHOOD. Enter a value between 0 and 7. This value measures the likelihood of a Corps HQ appearing on its start or arrival hex at the scheduled time. A value of 7 means that the Corps HQ is certain to arrive. HQs or brigades on the same side with the same likelihood value will be delayed by the same number of turns. Units with values of 4 or less may not arrive at all.

Division HQs

DIVISION HQ I.D. Enter 1-9 character name to identify the Division or its commander.

CORPS. Enter a number between 0 and 15. This number defines the place the division will occupy in the order of battle. An entry of 0 places the division directly under the command of the Army HQ. An entry of 1-15 places the division under the command of the Corps HQ identified by that number.

DIVISION TYPE. Enter a value of 0 or 1. A value of 0 specifies an infantry division; a value of 1 specifies a cavalry division.

Mounted infantry divisions should be classified as infantry divisions for this purpose. You should not place artillery brigades in divisions but rather attach them to Corps or Army HQs. Division artillery should be distributed among the component brigades.

ORDERS. Enter a number between 0 and 2. 0 = offensive, 1 = defensive, 2 = reserve. A division must have an offensive order to move on an enemy controlled objective. A division with an offensive order may select two objectives, the first defines the route of march to the final destination. A division with a defensive order may move only to a friendly controlled objective. Only one objective can be given to a division with a defensive order. A division with a reserve order will hold in place, awaiting further orders. A division with a reserve order will not pay any attention to an objective. Note that the Army commander, or the Corps commander, can change these orders as soon as the division comes within communication range. The primary function of these orders is to make sure that newly arriving troops do not mill about aimlessly but move sensibly into battle.

OBJECTIVE #1. Enter a value between 0 and 23. A value of 0 specifies no objective; any other value identifies a particular objective. The previous paragraph describes their purpose.

OBJECTIVE #2. Enter a value between 0 and 23. As above.

LEADERSHIP. Enter a value between 0 and 7. This value measures the experience, confidence and determination of the division commander. It is especially important when the Division HQ is not in communication with its superior HQ and must rely on its own initiative to get things moving.

STAFF. Enter a value between 0 and 7. This value is a subjective evaluation of the amount of preparation the Division HQ and its commander have done for the battle. Factors which are included in this rating are battlefield familiarity (recon), extent and detail of the briefings given to subordinates, staff experience and the overall confidence of the division in its commander. These are the same criteria used to rate the Army and Corps staff values.

Brigades

BRIGADE I.D. Enter a 1-3 character name to identify the brigade or its commander. IBM users can enter a 1-9 character name.

UNIT SIZE (IBM Only). Enter a 1-3 character name to identify the size of the unit; e. g. Bde, Rgt, Bn or Bty. This is cosmetic only and appears on the unit roster in the IBM version.

LOCATION. Enter the x, y map co-ordinates of the brigade's start or arrival hex.

CORPS. Enter a number between 0 and 15. This number helps define the place the brigade will occupy in the order of battle. An entry of 1-15 places the brigade directly under the command of the Corps HQ identified by that number. An entry of 0 means that the brigade is not under the command of any of the corps in the game.

DIVISION. Enter a number between 0 and 39. This number helps define the place the brigade will occupy in the order of battle.

An entry of 1-39 places the brigade directly under the command of the Division HQ identified by that number. An entry of 0 means that the brigade is not under the command of any of the divisions in the game. Note that if both Corps and Division values are 0, then the brigade will be under the direct command of the Army HQ.

ARRIVAL. Enter a number between 0 and 95. This is the turn that the brigade will arrive on the map. An arrival number of 0 means the brigade begins the game deployed on the map.

BRIGADE TYPE. Enter a value of 0-3. A value of 0 specifies an infantry brigade, a value of 1 specifies a mounted infantry brigade, a value of 2 specifies a cavalry brigade and a value of 3 specifies an artillery brigade.

OBJECTIVE. Enter a value between 0 and 23. A value of 0 specifies no objective; any other value identifies a particular objective.

In general, the only brigades which need objectives are independent brigades attached to Corps or Army HQs or brigades scheduled as reinforcements. If a reinforcing brigade does not

have an objective, it will mill about for one turn before receiving instructions from its superior HQ.

SMALL ARMS TYPE. Enter a value between 0 and 31. A value of 0 specifies that the brigade is not equipped with small arms. A value of 1-31 specifies which small arms type from the weapons list has been issued to the brigade.

ARTILLERY TYPE. Enter a value between 0 and 31. A value of 0 specifies that the brigade is not equipped with artillery. A value of 1-31 specifies which artillery type from the weapons list has been issued to the brigade.

TROOP STRENGTH. Enter a value between 0 and 31. This value describes the size of the brigade in increments of 100 men.

MOVEMENT. Enter a value between 0 and 15. It is the number of movement points the brigade has available each turn to move over the map. We recommend that Infantry and artillery brigades be given 4-8 MPs, mounted infantry and cavalry brigades 6-12 MPs. Brigades which were capable of particular initiative or enthusiasm can be given a 1-3 MP bonus. The final value chosen should also take into account the movement point costs of the terrain on the battlefield.

ARTILLERY STRENGTH. Enter a value between 0 and 15. This value specifies the number of artillery pieces in the brigade. For all Civil War battles, we recommend that 1 point of this value be equal to 2 pieces of artillery. Thus, a typical 6 gun battery attached to a brigade would have an artillery strength of 3.

SHATTERED. Enter a number between 0 and 1. A value of 0 indicates that the brigade begins the game in a normal condition. A value of 1 indicates that the brigade begins the game suffering from a recent mauling. The effect is the same as for a brigade shattered in the course of the game.

LEADERSHIP. Enter a value between 0 and 7. This value measures the experience, confidence and determination of the brigade commander. It is especially important when the brigade is not in communication with its superior HQ and must rely on its own initiative to get things moving.

COHESION. Enter a value between 0 and 7. This value should be set at 7 unless the scenario begins in the middle of a battle. Cohesion measures the current fighting condition of the brigade as described in the game routines section.

EXPERIENCE. Enter a number between 0 and 7. 0 = green and unreliable (but not necessarily useless), 7 = elite troops of the highest quality (for example the Iron Brigade or the Stonewall Brigade). The average brigade should have an experience between 3 and 5, although this value should increase toward the end of the war; especially for Confederate brigades.

REGIMENTS. Enter a number between 0 and 7. This number specifies

the number of regiments (or major sub-units) which make up the brigade. It is a very good indicator of the brigade's flexibility.

LIKELIHOOD. Enter a value between 0 and 7. This value measures the likelihood of a brigade appearing on its start or arrival hex at the scheduled time. A value of 7 means that the brigade is certain to arrive. HQs or brigades on the same side with the same likelihood value will be delayed by the same number of turns.

(iv). Objectives (Menu 12)

Examine the blank objective chart in Appendix A.

A maximum of 23 objectives per scenario can be created. The <FORWARD> and <BACK> lines in the menu window are used to bring up the next objective. The <EDIT> line is used to enter the objective and set its parameters. The <MAP> line is an alternative method of positioning the objective on the map.

Each objective must be given a 1-11 character name and an x, y map location.

Victory points for each side can be awarded for the possession of an objective on a turn by turn basis throughout the game and/or at the end of the game.

When awarding points throughout the game, you must select the turn that point scoring will begin and the turn on which it will end.

If you wish to create an objective simply as a signpost for the direction of your troops, then don't assign any VPs for its possession.

A manoeuvre value of 0-15 is available to make a particular objective more attractive to the computer's movement routines. The higher the value, the more likely is the computer to route troops through that point. The best way to get the feel for this tool is to have a careful look at the historical scenarios. Then, if the troops in your scenario are reluctant to go the way you want them to, experiment with the manoeuvre value.

(c). TITLE (Menu 15)

Enter a 1-16 character name for the scenario. There are up to three 26 character lines you can use for a sub-title to the scenario.

Enter a 1-9 character name to identify the North nationality.

Enter a 1-9 character name to identify the South nationality.

These character names will be the ones appearing in the first game menu; i.e. Menu H (Game Master).

(d). BRIEFING (Menu 14)

(i). Rosters (Menu 15)

There are two items to enter here. The advice window allows you to enter several paragraphs of handy hints for each side. These can be accessed during the game from Menu 12.

The roster menu should only be edited once you have entered all the data for your forces. The display shows your forces organised in a standard military way. All you have to do is tidy up the appearance by inserting line spaces to make the roster look professional. Look at one of the scenarios to see what can be done. To do it, use the arrow keys to select the <EDIT> line and then the arrow keys again to move the bar cursor to the line below where you wish to insert a space. Hit (RET) to insert the space. Blank lines are identified by the word <insert>. To remove a blank line, position the bar cursor over the blank line and hit (RET).

(ii). Scenario Setup (Menu 16)

Enter the turn, day, month, year and century that the scenario begins.

A maximum movement distance (in hexes) must be specified for each type of unit. A separate specification is made for each nationality. Enter a value between 0 and 15. We recommend, for Civil War battles, these values; infantry brigades (4-6), mounted infantry brigades (6-9), artillery brigades (4-9), cavalry brigades (6-12) and HQs (9-15).

To recreate the conditions of a surprise attack, enter a value of 1 in the <Encamped> line for a side which is caught unprepared by the enemy assault. If there is no surprise, enter a value of 0.

To allow a side to construct battlefield entrenchments in the course of the scenario, enter a value of 1-7 in the <Entrench> line. A value of 0 means a side cannot construct battlefield entrenchments. Entrenchments increase the cover value of a hex. The higher the entrenchment value, the more protection a unit will receive.

In addition to the victory points awarded for the occupation of objectives, points are also awarded for causing casualties to enemy leaders and troops. A value of 0-31 can be entered for each category.

IBM Only. A combat value of 0-7 has been added to reflect the change in unit density in combat as the war progressed; i.e. the lethality of the rifled musket forced troops to abandon the exposed formations characteristic of the Napoleonic Wars. A value of 0 describes very exposed formations; a value of 7 describes formations deployed to minimise enemy firepower.

(iii). Scenario Details (Menu 16)

Examine the blank briefing form in Appendix A as well as any of the scenarios.

A scenario may last as long as 4 days. These routines fill out much of the background information necessary to get the game moving.

For each day the expected atmospheric weather must be defined,

whether each side is expected to take the offensive must be decided and three values must be entered for each of the 24 hours in a day.

WEATHER. Enter a value between 0 and 4. 0 = clear, 1 = overcast, 2 = drizzle, 3 = rain, 4 = snow.

NORTH OFFENSIVE. Enter a value of 0 or 1. A value of 0 puts the North on the defensive for the day. A value of 1 puts the North on the offensive for the day.

SOUTH OFFENSIVE. Enter a value of 0 or 1. A value of 0 puts the South on the defensive for the day. A value of 1 puts the South on the offensive for the day.

MODE. Enter a value between 0 and 3. 0 = night, 1 = dawn, 2 = dusk, 3 = day.

MOVE. Enter a value between 0 and 3. 0 = no move, normal cohesion recovery will occur; 1 = normal move, both sides will move and fight; 2 = end game, a normal move is completed and then the game ends; 3 = skip, no move and no cohesion recovery is allowed.

FOG. Enter a value between 0 and 2. 0 = no fog, 1 = light fog, 2 = heavy fog.

5. WARPAINT

WarPaint is entirely new to wargame construction. Even we are amazed at just how useful it is. Every icon in the game can be edited, including all unit and terrain icons.

5.1 WARPAINT (Menu 17)

The <GRAPHICS> line gives access to the icon editor. The <STORE> and <RECALL> lines are used to install or extract a graphics set from any save game or scenario disk.

To transfer the graphics from one scenario to another, you would execute the following steps. Load the source scenario, and use the <STORE> line to load the graphics. Remove that disk and insert the destination disk. Load the destination scenario and use <RECALL>. The graphics that were in the source scenario are now in the destination scenario. Save the altered scenario and the change is permanent.

The <FULL MAP> line gives IBM users access to the "full-map" graphic routines.

5.2 DESIGN GRAPHICS (Menu 18)

The screen shows a large boxed section on the left. This shows a pixel by pixel representation of an icon. Below it the icon is shown in white and the allowable colours as it would look upon the screen. The icon number is shown above the menu box. The current selected colour is shown below the menu box. Selecting the <EDIT> line shows a flashing cursor in the top left of the icon box. The box is fourteen elements across by 16 elements down. The presence of a pixel is shown by a white square and its

absence by a white dash.

The I, J, K, and M keys or the arrow keys are used to move the cursor around the icon box. At any location the (RET) key creates a pixel if none is present and removes it if one is. As you make changes in the large icon box these are reflected in the small icons at the bottom of the screen.

The rules for manipulating the screen icons are a trifle complicated and may vary from computer to computer. They are explained in detail below.

After using the edit function type (ESC) to leave. Apple II/C64 users will be asked to <SAVE> or <IGNORE> their changes and must make this choice before returning to Menu 21. Choosing <SAVE> incorporates any changes you have made while <IGNORE> returns the icon to its previous shape. IBM users have access to the <CLIP> function described below.

The <COLOR> option allows you to change the selected colour of the icon. The <STORE> and <RECALL> options allow you transfer an icon between different icon numbers, allowing easy variations. The <CLEAR> option blanks the screen, and for IBM users, at the same time transfers the previous image to the clip location. The <CLIP> option restores the screen with the image currently in the clip location.

5.3 "FULL-MAP" GRAPHICS (Menus 19-21)

These notes offer some suggestions for the use of the "full-map" graphics available to IBM users with EGA or VGA cards and a colour monitor. Read the note at the end of text in Menu 8 (Map Create Utility). It explains how to disable the "full map" graphics so the basic map can be created.

Users with EGA or VGA cards can access our enhanced graphics routines for the 250 icons which make up the different terrain shapes and the 60 odd icons which represent units and other functions.

The cumbersome <SAVE> and <IGNORE> lines from the standard graphic routines have been replaced by a 'Clip' feature. Whenever you edit a shape, the original shape is transferred to the 'clip' window. To restore the original shape, select <CLIP> from the menu window.

The enhanced graphics routines have a number of additional features. Select <PAINT> to bring up the enhanced graphic menu. <EDIT> will take you into the icon image. Use the arrow keys to locate the pixel you wish to edit. Use the Tab/Shift Tab keys to select a colour from the palette at the bottom of the screen.

Type <d> to set the drag key. This will trail the chosen colour after the cursor. Type <d> again to turn off the drag feature.

<TRIAL MAP> will show you what your terrain shape will look like on a full screen.

<CHNGE CLR> allows you to change a particular colour to another. Select <CHNGE CLR> and then use the arrow keys to locate on the terrain shape the colour you wish to change. Now hit (ENTER) and use the arrow/tab keys to locate from the palette the colour you wish to substitute.

<SHIFT> shunts the terrain shape in the direction specified by the chosen arrow key. Use this feature to vary a particular terrain shape.

<FLIP HORZ> will flip the shape horizontally.

<FLIP VERT> will flip the shape vertically.

<MAKE HEX> will bring in the corresponding terrain shape from the standard graphic routines.

The f1-f8 and Alt f1-f8 keys will select a particular colour. The f9 key will select the colour under the cursor. Tab/Shift Tab and +/- will select the next colour in either direction.

A little familiarity with these routines will teach you all you need to know.

TECHNICAL NOTES

(a). IBM Users. IBM users have neither pixel nor colour-mixing problems! The CGA card has fewer colour choices than the EGA card. Note that Tandy users have the same number of colour choices as an EGA user.

(b). Icon Functions. All icons have a particular function. In the case of the terrain icons (numbers 0 to 31), the functions and the name are defined in the terrain menu. All other icons serve a particular purpose which does not change. If you edit the Confederate Army HQ icon to look like a woods symbol, it will still function as an Army HQ.