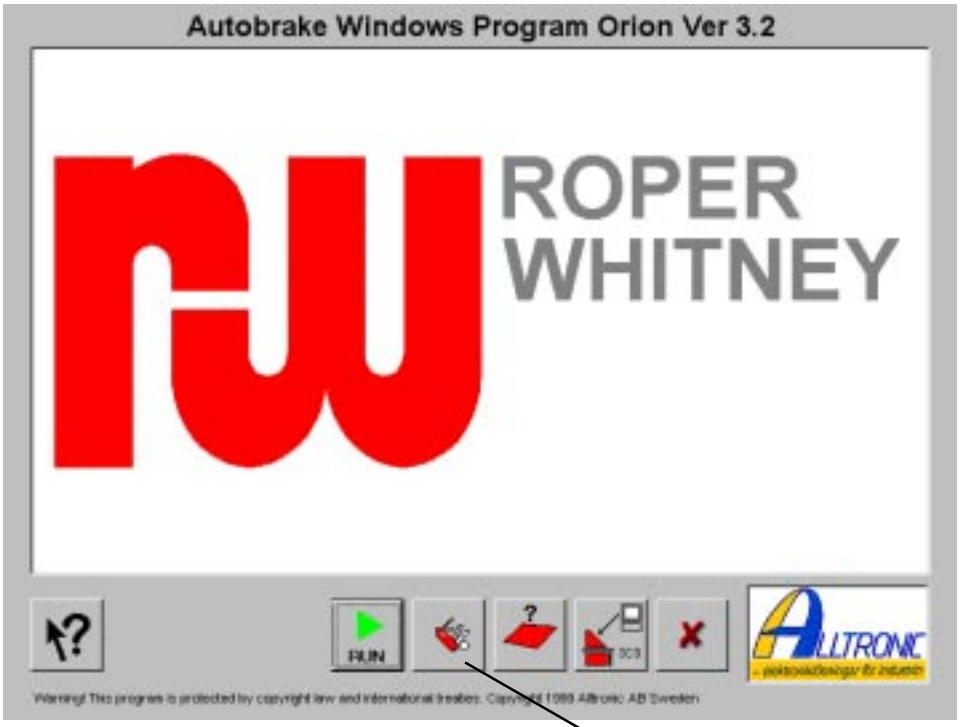
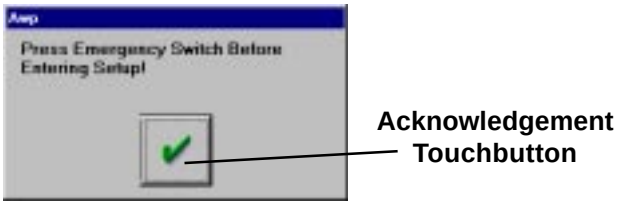


MAINSCR

Figure 13-1. Mainscreen



EMERDISP

Figure 13-2. Emergency Stop Pop-Up Display

SECTION 13
MACHINE PARAMETERS

Machine Parameters control the performance and limits of the machine. Parameters are shown in the screens listed below.

Backgauge Settings (See Figure 13-3.)

Bending Beam Settings (See Figure 13-4.)

Kombi Beam Settings (See Figure 13-5.)

Clamping Beam Settings (See Figure 13-6.)

System Settings (See Figure 13-7.)

Default Settings (See Figure 13-9 and 13-10.)

Each setting screen has a tab at the top which identifies it. All the tabs are visible on each screen. Pressing any tab displays its associated setting screen.

Parameters in effect can be viewed at any time for reference. However, they cannot be changed without using thesystem security password. Changes should only be made by qualified personnel. See Section 3, Security, for parameter change procedures.

GETTING STARTED

Touch the Machine Parameters Touchbutton on the Main Screen (Figure 13-1) to bring up the Emergency Stop Pop-Up Display (Figure 13-2).

Press the red Emergency Stop Pushbutton located on the right side of the console next to the screen.

Touch the Acknowledgement Touchbutton on the Emergency Stop Pop-Up Display. This will bring up the Backgauge Settings Screen shown in Figure 13-3.

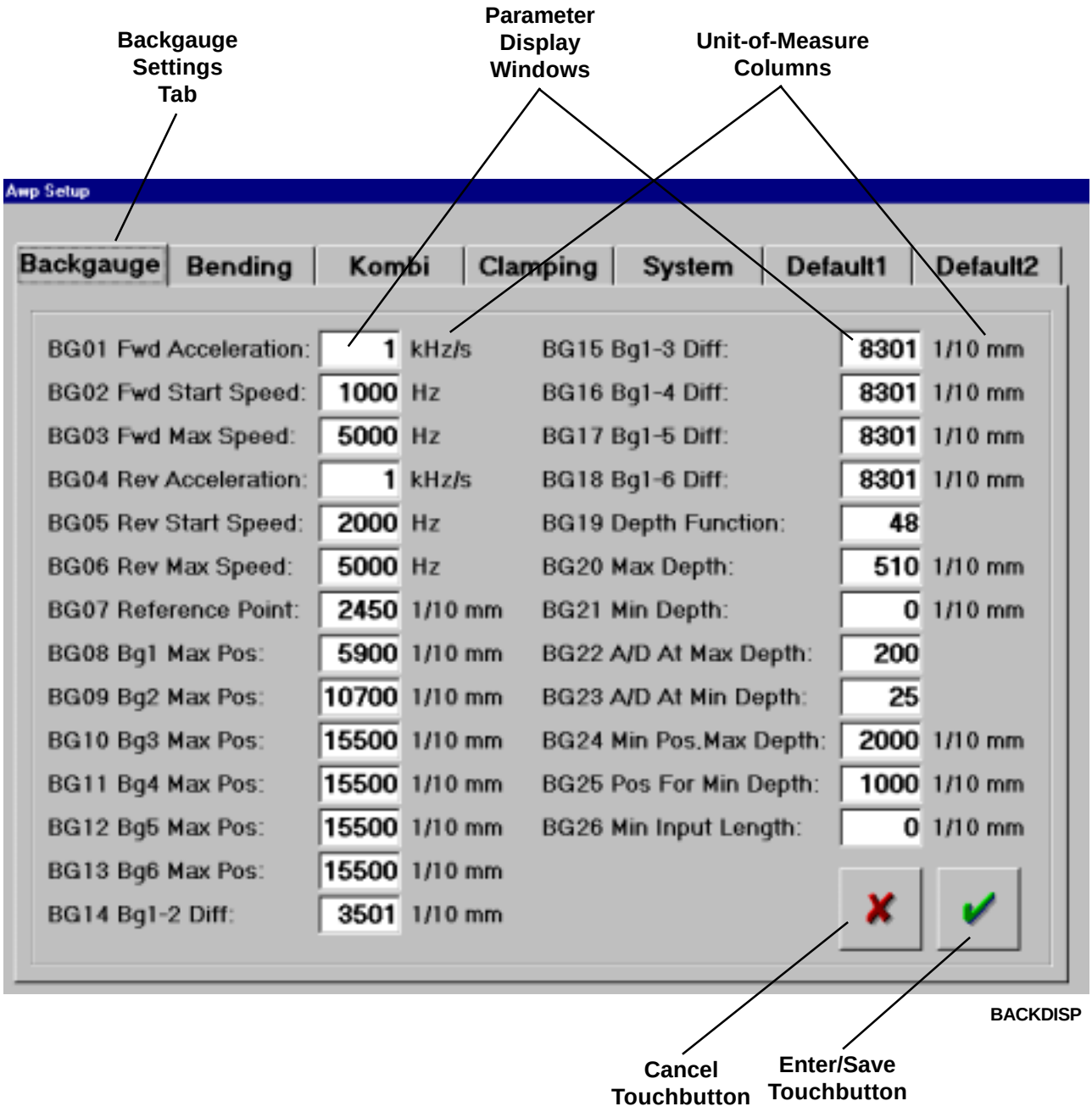


Figure 13-3. Backgauge Settings Screen

BACKGAUGE SETTING SCREEN

The Backgauge Setting Screen contains all the changeable parameters pertaining to the machine backgauge.Changeable parameters appear in the white Parameter Display Windows. Values in these windows may be either a value within a range (in which case the Unit-of-Measure Columns help define the values), or specific numeric values having specific functional meanings. Table 13-1 explains the values appearing in the Parameter Display Windows.

Table 13-1. Backgauge Parameters

Parameter Code	Range or Meaning	Definition
BG01	0 TO 8	The rate at which the backgauge will accelerate to its maximum speed when moving toward the front of the machine.
BG02	75 TO 10000	The initial speed of the backgauge when moving toward the front of the machine.
BG03	75 TO 10000	The maximum speed of the backgauge when moving toward the front of the machine.
BG04	0 TO 8	The rate at which the backgauge will accelerate to its maximum speed when moving toward the rear of the machine.
BG05	75 TO 10000	The initial speed of the backgauge when moving toward the rear of the machine.
BG06	75 TO 10000	The maximum speed of the backgauge when moving toward the rear of the machine.
BG07	2400 TO 2600	The backgauge “home” position setting.
BG08	Maximum	The maximum backgauge position that the first set of fingers will move to.
BG09	Maximum	The maximum backgauge position that the second set of fingers will move to.
BG10	Maximum	The maximum backgauge position that the third set of fingers will move
		to. If the backgauge has less than three sets of fingers, then this value will be the same as BG09.
BG11	Maximum	The maximum backgauge position that the fourth set of fingers will move to. If the backgauge has less than four sets of fingers, then this value will be the same as BG10.
BG12	Maximum	The maximum backgauge position that the fifth set of fingers will move to. If the backgauge has less than five sets of fingers, then this value will be the same as BG11.
BG13	Maximum	The maximum backgauge position that the sixth set of fingers will move to. If the backgauge has less than six sets of fingers, then this value will be the same as BG12.
BG14	Differential	The difference in the backgauge position from finger one to finger two.
BG15	Differential	The difference in the backgauge position from finger one to finger three. If the backgauge has less than three sets of fingers, then this value will be the same as BG14.
BG16	Differential	The difference in the backgauge position from finger one to finger four. If the backgauge has less than four sets of fingers, then this value will be the same as BG15.
BG17	Differential	The difference in the backgauge position from finger one to finger five. If the backgauge has less than five sets of fingers, then this value will be the same as BG16.
BG18	Differential	The difference in the backgauge position from finger one to finger six. If the backgauge has less than six sets of fingers, then this value will be the same as BG17.

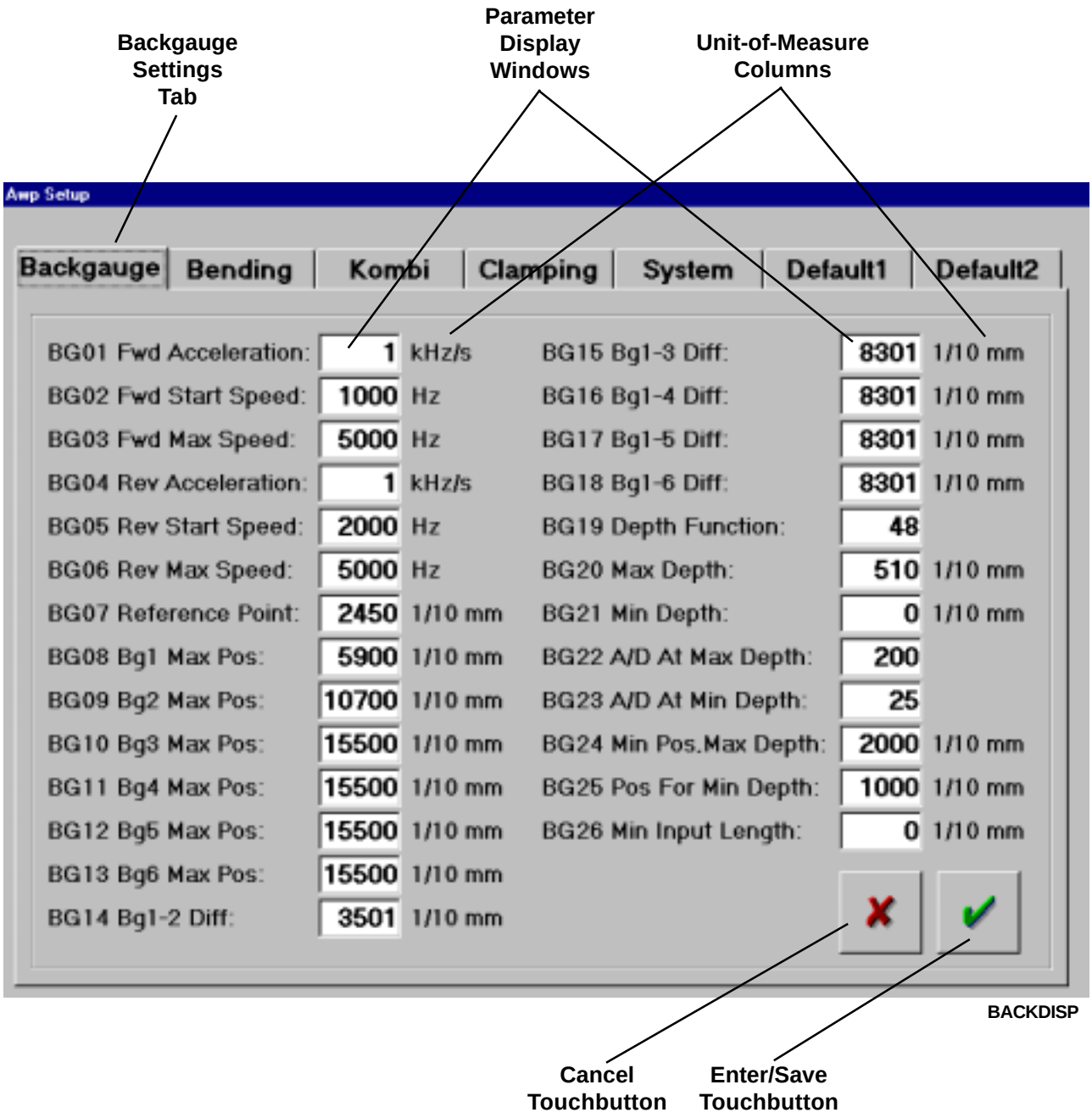


Figure 13-3. Backgauge Settings Screen (continued)

Table 13-1. Backgauge Parameters (continued)

Parameter Code	Range or Meaning	Definition
BG19	48 = No 49 = Yes	This setting is either “ON” or “OFF”: normally set to “OFF”. When set to “ON”, the operator is allowed to program the vertical position of the backgauge. This feature is only effective on those machines equipped with a Multifold backgauge.
BG20	100 to 1000	The lowest vertical position of the backgauge relative to the top of the lower jaw. If BG19 is set to “48” (OFF), then this function is disabled.
BG21	0 to 90	The highest vertical position of the backgauge relative to the top of the lower jaw. If BG19 is set to “48” (OFF), then this function is disabled.
BG22	128 to 255	The linear transducer calibration reading taken from the Diagnostic screen when the backgauge is at its maximum depth. If BG19 is set to “48” (OFF), then this function is disabled.
BG23	0 to 127	The linear transducer calibration reading taken from the Diagnostic screen when the backgauge is at its minimum depth. If BG19 is set to “48” (OFF), then this function is disabled.
BG24	100 to 4000	The minimum forward position allowed by the front backgauge fingers when the backgauge is at its maximum depth. If BG19 is set to “48” (OFF), then this function is disabled.
BG25	100 to 4000	The minimum forward position allowed by the front backgauge fingers when the backgauge is at its minimum depth: must be less than BG24. If BG19 is set to “48” (OFF), then this function is disabled.
BG26	0 to 200	The minimum programmable setting for the front backgauge fingers: normally set to zero “0”.

MAKING CHANGES TO BACKGAUGE PARAMETERS

Backgauge parameters can be changed by those authorized to make such changes. Because system security is involved, instructions for making such changes are contained in Section 3, Security.

RETURNING TO THE MAIN SCREEN

To return to the Main Screen, touch the Cancel Touchbutton.

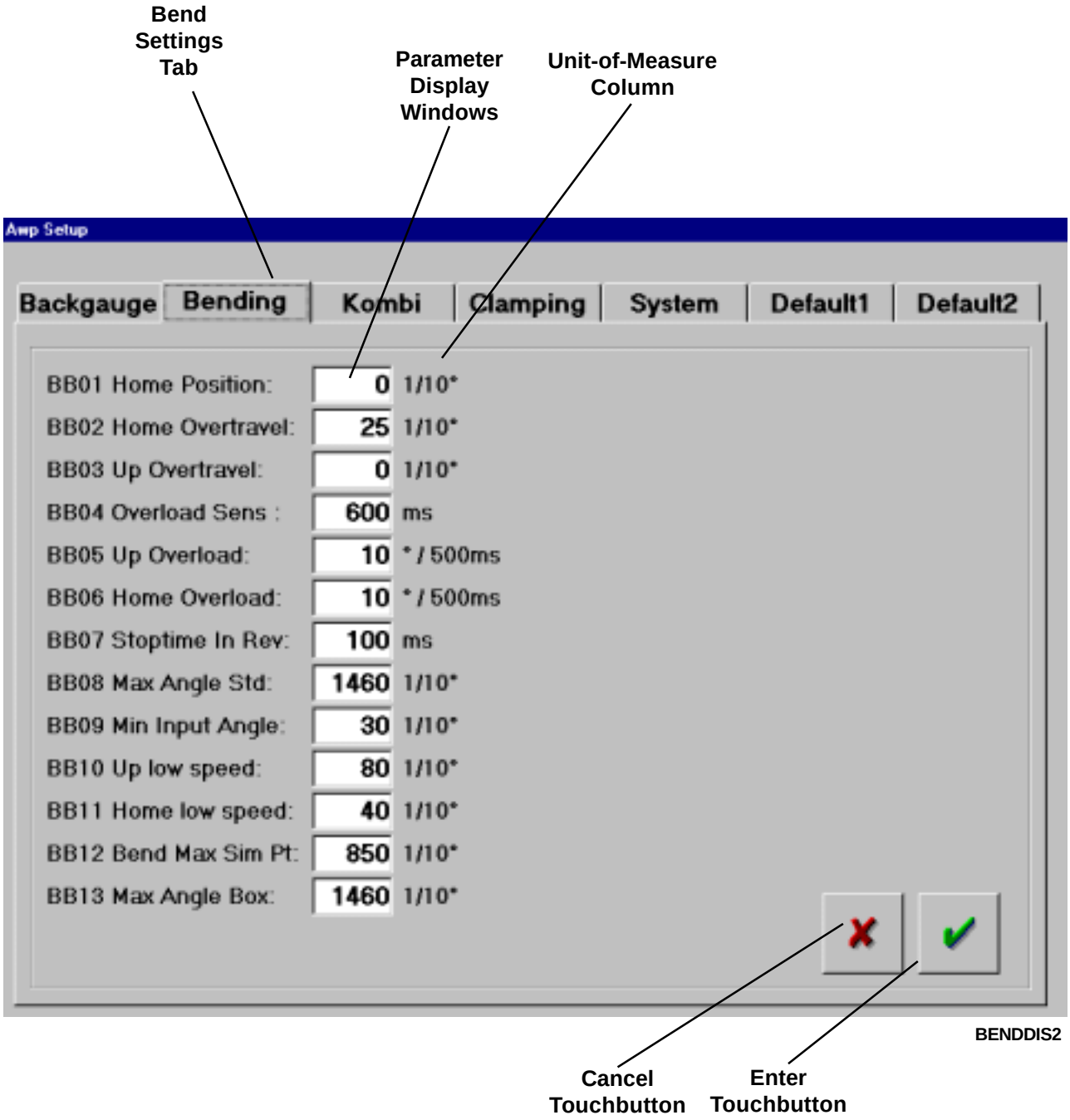


Figure 13-4. Bending Beam Settings Screen

BENDING BEAM SETTINGS SCREEN

The Bending Beam Settings Screen contains all the changeable parameters pertaining to the machine bending beam. Changeable parameters appear in the white Parameter Display Windows. Values in these windows may be either a value within a range (in which case the Unit-of-Measure Columns help define the values), or specific numeric values having specific functional meanings. Table 13-2 explains the values appearing in the Parameter Display Windows.

Table 13-2. Bending Beam Parameters

Parameter Code	Range or Meaning	Definition
BB01	10 to 50	The “home” position for the Bending Beam
BB02	0 to 200	The angle at which power is removed from the bending motor prior to the bending beam reaching its “home” position.
BB03	0 to 200	The angle at which power is removed from the bending motor prior to the bending beam reaching its programmed position. Programmed angles must be greater than this value before the bending beam will move.
BB04	100 to 10000	This is the time that must elapse before any type overload detection will occur, expressed in millisecond: sets the overload sensitivity.
BB05	1 to 100	Sets the amount of error needed within 500 milliseconds before an overload is detected during the upward motion of the bending beam.
BB06	1 to 100	Sets the amount of error needed within 500 milliseconds before an overload is detected during the downward motion of the bending beam.
BB07	50 to 1000	The amount of time that the bending beam will pause after reaching its programmed position before returning “home”.
BB08	600 to 1800	The maximum programmed angle allowed with standard tooling.
BB09	0 = Jog Range 10 to 100	The minimum programmed angle allowed: equal to or greater than BB03.
BB10	0 to 300	The angle at which the bending beam will change to a reduced speed prior to reaching the programmed bending angle. This feature is only valid on machines with variable speed drives or hydraulic drives.
BB11	0 to 300	The angle at which the bending beam will change to a reduced speed prior to reaching its “home” position. This feature is only valid on machines with variable speed drives or hydraulic drives.
BB12	0 to 1800	The maximum angle that the bending beam will move to when simulated clamping pressure is activated.
BB13	600 to 1800	The maximum programmed angle allowed with box tooling.

MAKING CHANGES TO BENDING BEAM PARAMETERS

Bending Beam parameters can be changed by those authorized to make such changes. Because system security is involved, instructions for making such changes are contained in Section 3, Security.

RETURNING TO THE MAIN SCREEN

To return to the Main Screen, touch the Cancel Touchbutton.

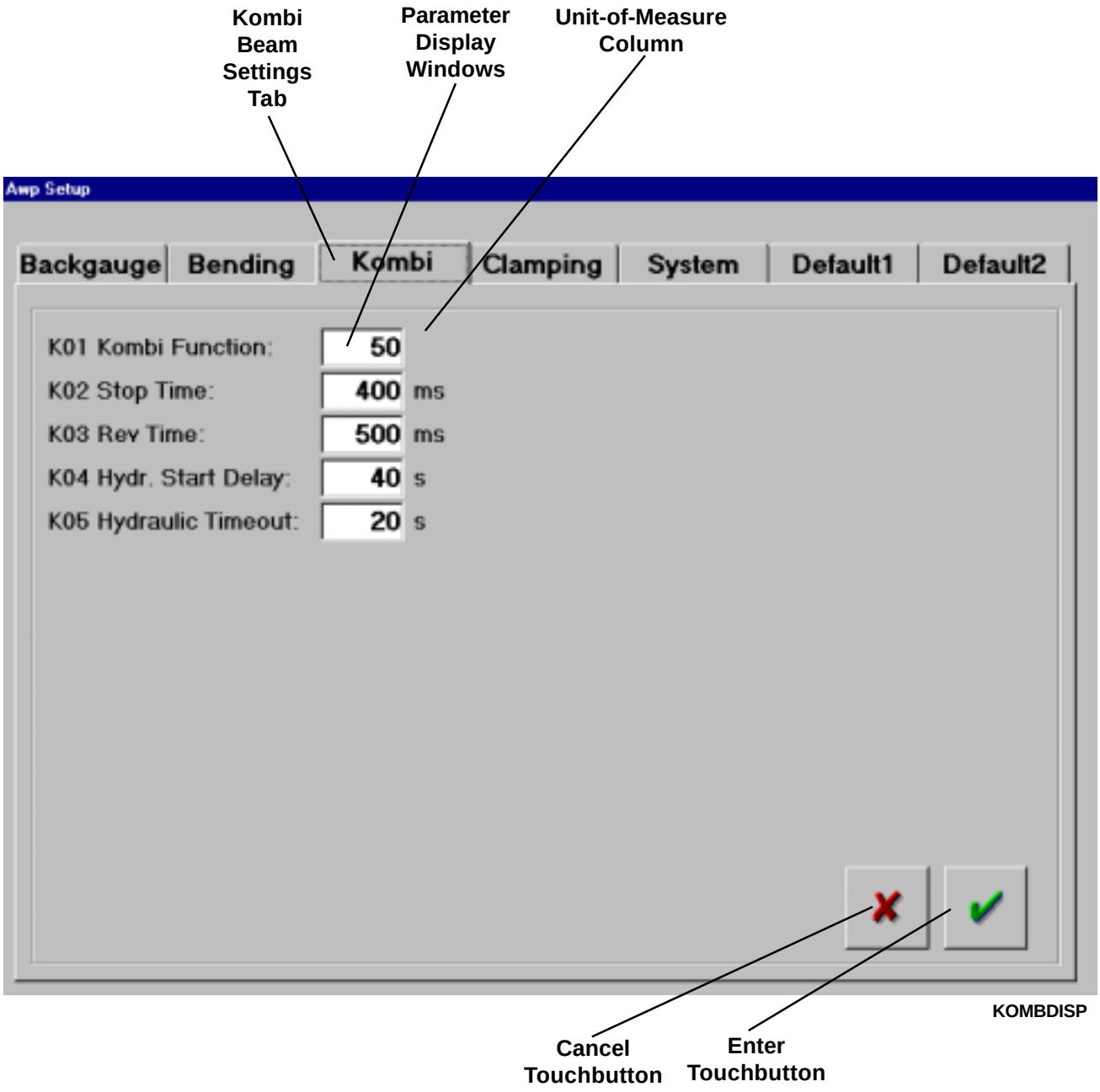


Figure 13-5. Kombi Beam Settings Screen

KOMBI BEAM SETTINGS SCREEN

The Kombi Beam Settings Screen contains all the changeable parameters pertaining to the machine Kombi beam. Changeable parameters appear in the white Parameter Display Windows. Values in these windows may be either a value within a range (in which case the Unit-of-Measure Columns help define the values), or specific numeric values having specific functional meanings. Table 13-3 explains the values appearing in the Parameter Display Windows.

These settings only apply to those folding systems equipped with a rotating Kombi upper beam.

Table 13-3. Kombi Beam Parameters

Parameter Code	Range or Meaning	Definition
K01	48 = No Kombi Beam 49 = MS 50 = MC 51 = HS 52 = HC	This setting identifies whether the machine is equipped with the rotating Kombi beam or not. It also identifies if the Kombi uses a hydraulic locking system (H) or a mechanical locking system (M); and determines the type of control the operator has over the rotation of the beam: single actuation of the footswitch (S), or continuous actuation (C).
K02	10 to 10000	The time that the Kombi beam will continue in its rotation after activating its position switch: minimum setting of 10.
K03	10 to 10000	The time that the Kombi beam will rotate in the reverse direction into the locked position: minimum setting of 10.
K04	1 to 65	The hydraulic pump is activated when the pressure sensor reports a low reading after this amount of time has passed: minimum setting of one second. This setting is only effective on machines equipped with hydraulic locking Kombi beams.
K05	1 to 65	A low pressure warning is reported to the operator after this amount of time has passed when the pressure sensor measures a low reading: minimum setting of one second. Clamping and bending functions on the machine are paused until pressure is restored. This setting is only effective on machines equipped with hydraulic locking Kombi beams.

MAKING CHANGES TO KOMBI BEAM PARAMETERS

Kombi Beam parameters can be changed by those authorized to make such changes. Because system security is involved, instructions for making such changes are contained in Section 3, Security.

RETURNING TO THE MAIN SCREEN

To return to the Main Screen, touch the Cancel Touchbutton.

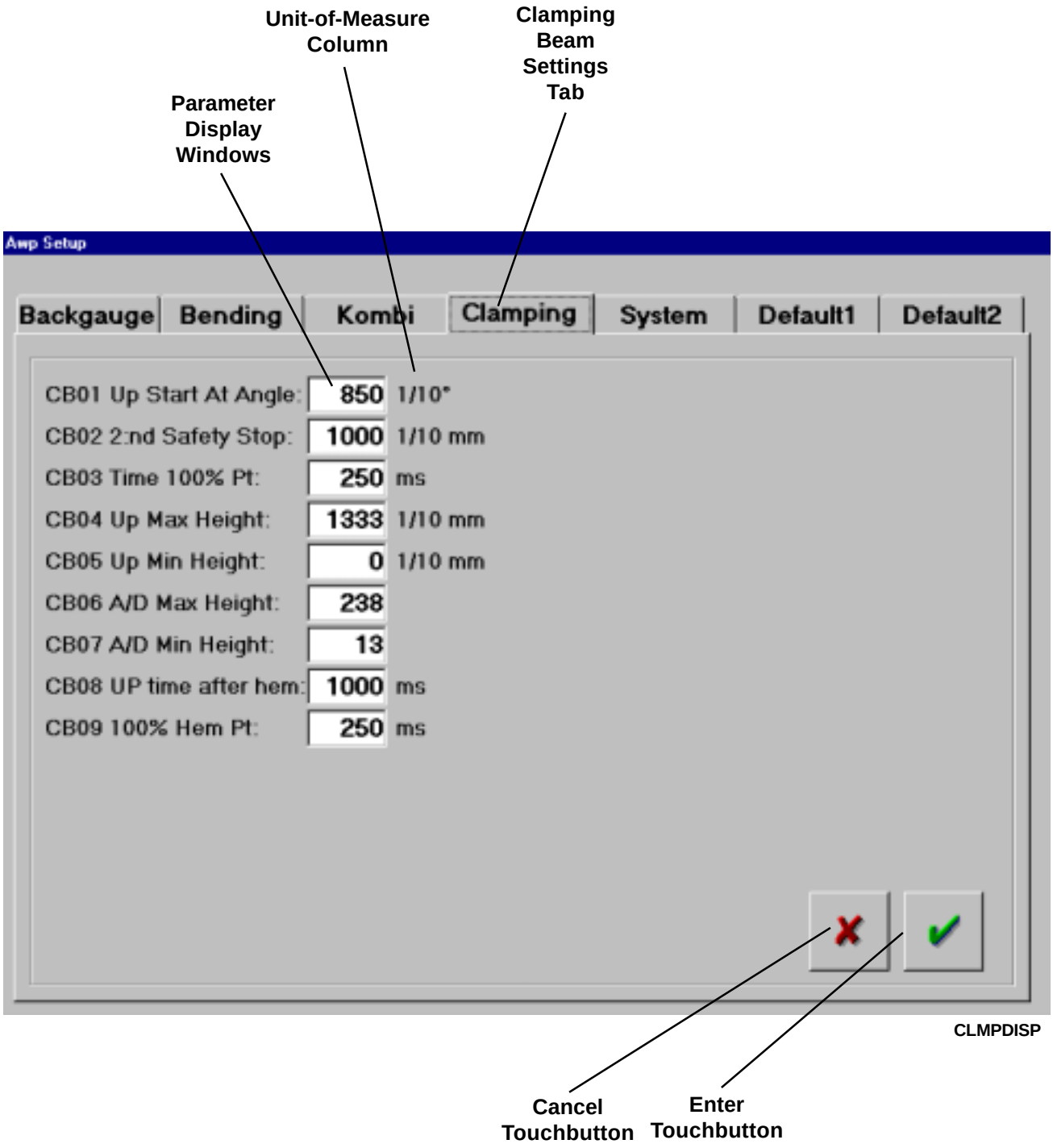


Figure 13-6. Clamping Beam Settings Screen

CLAMPING BEAM SETTINGS SCREEN

The Clamping Beam Settings Screen contains all the changeable parameters pertaining to the machine clamping beam. Changeable parameters appear in the white Parameter Display Windows. Values in these windows may be either a value within a range (in which case the Unit-of-Measure Columns help define the values), or specific numeric values having specific functional meanings. Table 13-4 explains the values appearing in the Parameter Display Windows.

Table 13-4. Clamping Beam Parameters

Parameter Code	Range or Meaning	Definition
CB01	0 to 900	The upper beam will start to raise during the return of the bending beam to its “home” position when the bending beam is at or below this angle.
CB02	0 to 1000	A secondary programmable vertical stop position for the upper jaw at which the upper beam will stop if clamping from a point above this setting. This setting has no function in version 3.1 or earlier Orion software
CB03	10 to 500	The maximum time that can elapse after the pressure switch is activated until the upper beam reaches 100% clamping pressure.
CB04	500 to 3000	The maximum height the upper beam can attain during programmed movement.
CB05	0 to 400	The minimum height the upper beam can attain during programmed movement.
CB06	128 to 255	The linear transducer calibration reading taken from the Diagnostic screen when the upper beam is at its maximum height.
CB07	0 to 127	The linear transducer calibration reading taken from the Diagnostic screen when the upper beam is at its minimum height.
CB08	0 to 2000	The minimum time that the upper beam will move upward after any hem is completely formed.
CB09	10 to 1000	The maximum time that can elapse after the pressure switch is activated until the upper beam reaches 100% hemming pressure.

MAKING CHANGES TO CLAMPING BEAM PARAMETERS

Clamping Beam parameters can be changed by those authorized to make such changes. Because system security is involved, instructions for making such changes are contained in Section 3, Security.

RETURNING TO THE MAIN SCREEN

To return to the Main Screen, touch the Cancel Touchbutton.

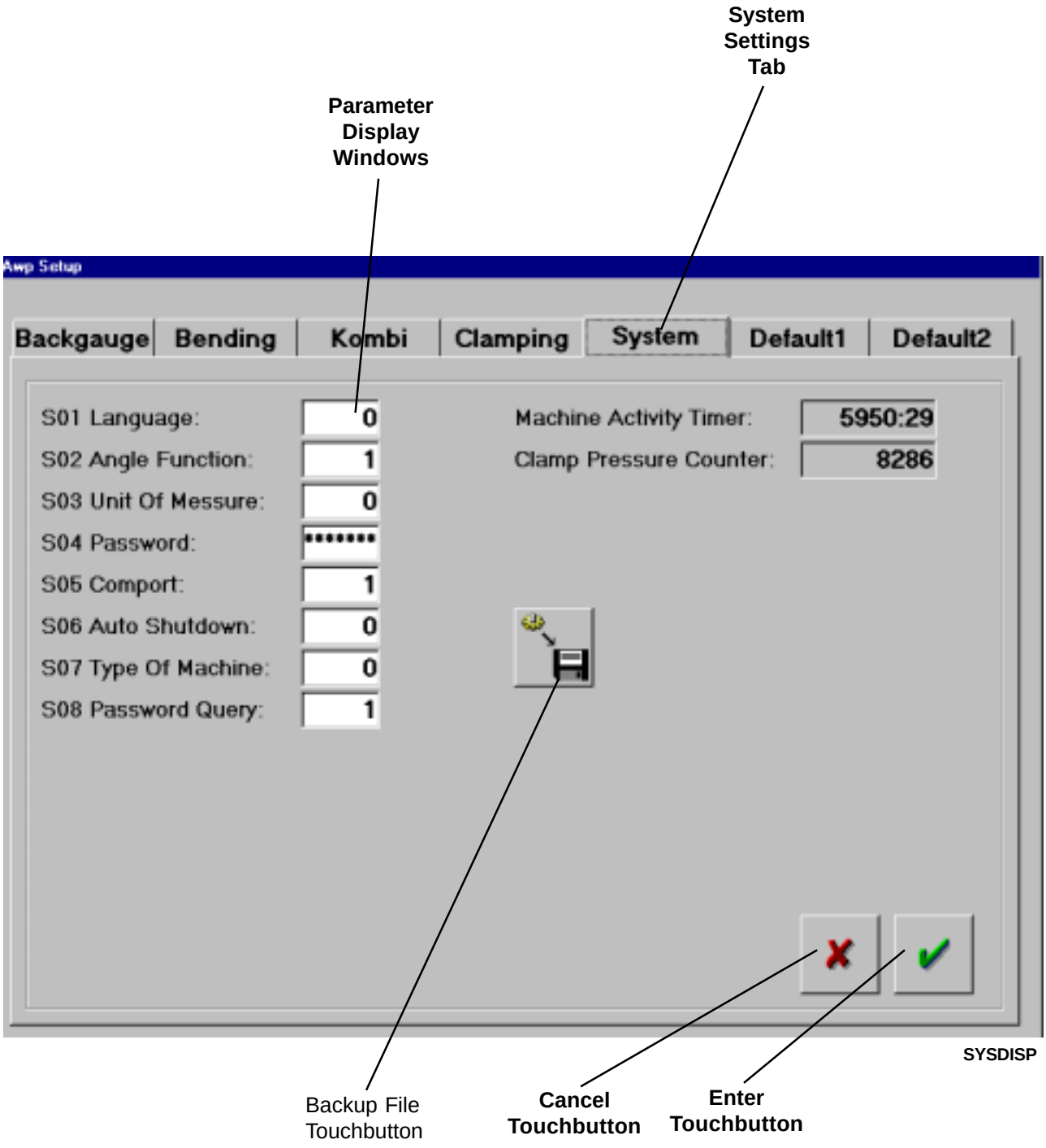


Figure 13-7. System Settings Screen

SYSTEM SETTINGS SCREEN

The System Settings Screen contains all the changeable parameters pertaining to the machine system itself. Changeable parameters appear in the white Parameter Display Windows. Values in these windows are specific numeric values having specific functional meanings. Table 13-5 explains the values appearing in the Parameter Display Windows.

Table 13-5. System Parameters

Parameter Code	Meaning	Definition
SO1	0 = English 1 = Swedish 2 = Danish 3 = Spanish 4 = Polish	This value sets the displayed language for the Orion software: the default is “0”.
SO2	0 = Measured Value 1 = Programmed Value	Selects whether the angle displayed while the bending beam is moving will be the measured value or the programmed value.
SO3	0 = Default Inch 1 = Default Metric 2 = Fixed Inch 3 = Fixed Metric	Sets the default measurement to inch or metric. The measurement may also be set to always display either inch or metric type: the Inch/Metric toggle button is then disabled.
SO4	User Defined String	The system password which must be entered to change any of the Machine Parameters: 255 characters maximum. The password is shown as “*******” for security reasons.
SO5	0 = No Comport 1 thru 16 = Comport No.	Sets the communications port used on the pendant computer for connecting to the ICS controller. When set to zero “0” communications are disabled to the ICS controller: used for remote (office) operation of the Orion software.
SO6	0 = No 1 = Yes	Sets the exit mode for the Orion software when the red “X” is pressed in the Main Screen: a value of zero “0” returns the operator to the Windows desktop; a value of one “1” starts the Windows auto-shutdown sequence when the Orion software is exited.
SO7	0 =Autobrake 1 = Automax	Identifies the machine on which the Orion software is being used.
SO8	0 = Don’t Ask 1 = Ask	Sets the system to permit file saving without a password, or to ask if a password is wanted when the file is saved.

BACKUP FILE TOUCHBUTTON

The Backup File Touchbutton in the System Settings Screen is used to copy key system files to a floppy disk. Press the Backup File Touchbutton to bring up the Backup Instruction Pop-Up Display shown in Figure 13-8.

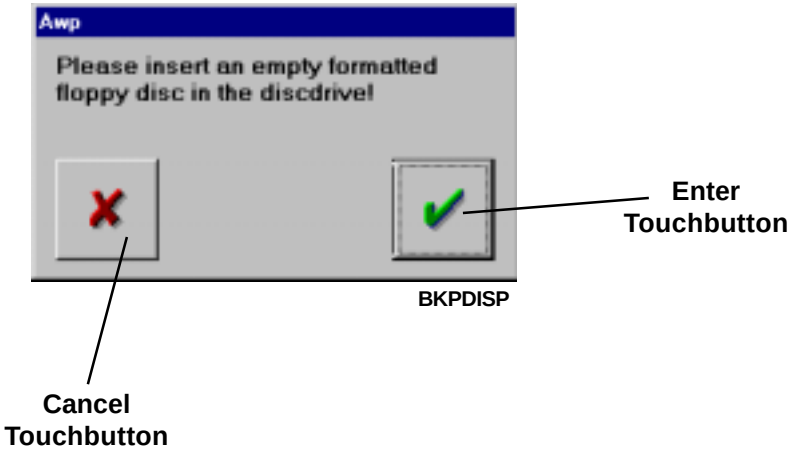


Figure 13-8. Backup Instruction Pop-Up Display

BACKING UP SYSTEM FILES

The Orion software will download the system setup file, the current machine activity log file, and the current language file to the disk. The disk can be used to diagnose any problems, or to restore the setup file should it become damaged.

When prompted by the Backup Instruction Pop-Up Display, place a blank 3.5-inch diskette in the floppy drive of the computer. Touch the Enter Touchbutton in the pop-up display, and the files will be copied. When copying is complete, the pop-up display will disappear, leaving the System Settings Screen visible.

Cancel the backup request by pressing the Cancel Touchbutton on the pop-up display.

MAKING CHANGES TO SYSTEM PARAMETERS

System parameters can be changed by those authorized to make such changes. Because system security is involved, instructions for making such changes are contained in Section 3, Security.

RETURNING TO THE MAIN SCREEN

To return to the Main Screen, touch the Cancel Touchbutton.

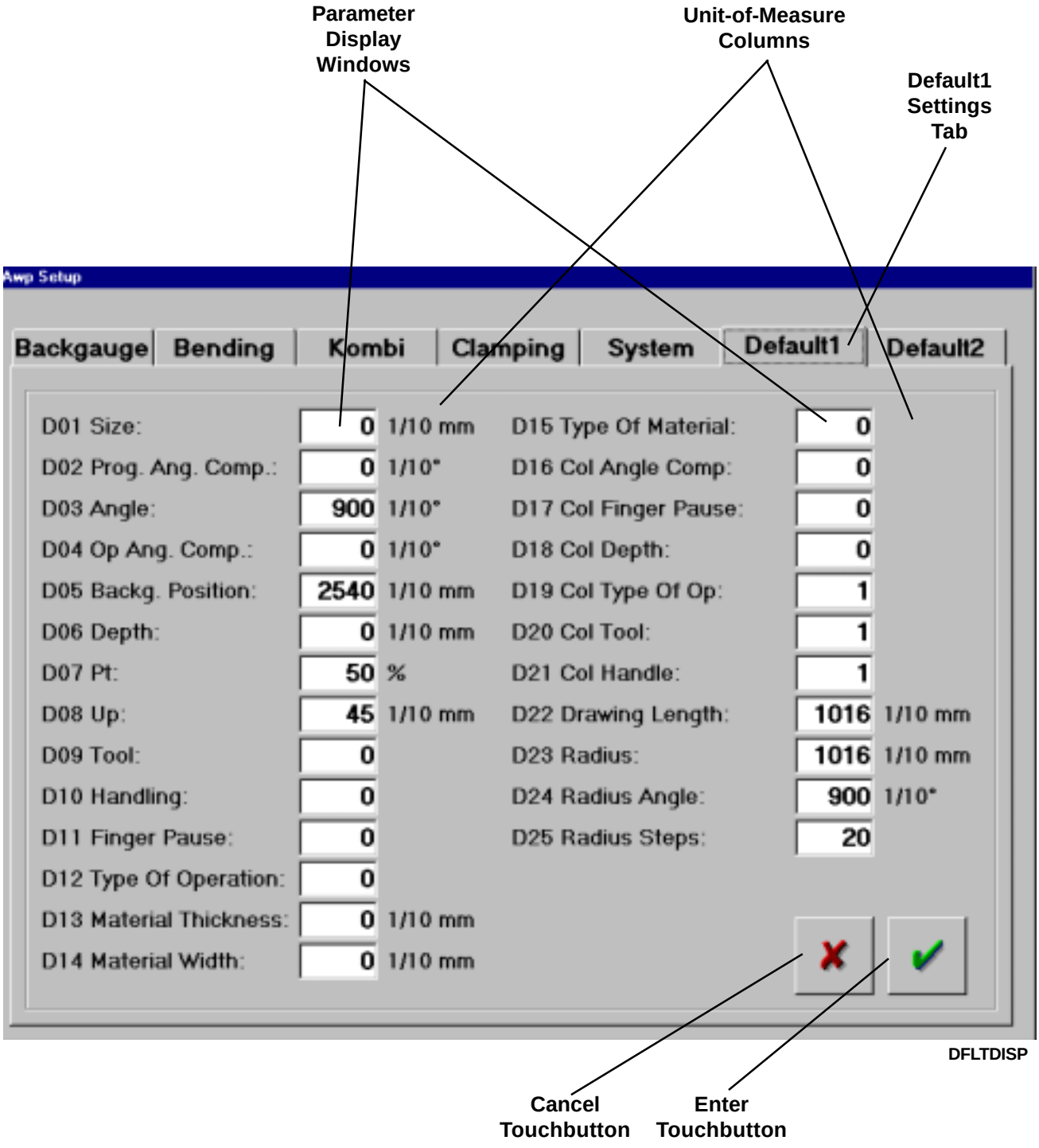


Figure 13-9. Default1 Settings Screen

DEFAULT1 SETTINGS SCREEN

The Default1 Settings Screen contains all the changeable default values which appear on the various screens as operation or programming progresses. The default values appear in the white Parameter Display Windows. Values in these windows are specific dimensional values, or they are numeric values having specific functional meanings. Table 13-6 explains the values appearing in the Parameter Display Windows.

Table 13-6. System Default Values

Default Value Code	Range or Meaning	Definition
D01	0 Min.	The default material blank size.
D02	-200 to +200	The default angle compensation for the entire part program.
D03	BB09 to BB08 or BB13	The default angle for each operation in the part program. (Refer to Bending Settings.)
D04	-200 to +200	The default angle compensation for each operation in the part program.
D05	BG26 to BG18	The default backgauge position for each operation in the part program. (Refer to Backgauge Settings.)
D06	BG21 to BG22	The default depth position for the backgauge for each operation in the part program. This setting is only effective on machines equipped with a Multifold backgauge. (Refer to Backgauge Settings.)
D07	0 to 100	The default clamping pressure for each operation in the part program.
D08	CB05 to CB04	The default open height between the clamp jaws at the start and end of each operation in the part program. (Refer to Clamping Beam Settings.)
D09	0 = Standard 1 = Box	The default tooling position for the Kombi beam for each operation in the part program. This setting is only effective on machines equipped with the rotating Kombi beam.
D10	0 = None 1 = FlipF 2 = Flip 3 = R90L 4 = R90R 5 = R180 6 = FR90L 7 = FR90	The default material handling type for each operation in the part program. (Refer to Figure 8-8 in Section 8, Operation, for an explanation of the codes in the “Meaning” Column.)
D11	0 = No 1 = Yes	The default setting to pause the backgauge motion and finger positioning for each operation in the part program.
D12	0 = Norm 1 = Bump 2 = Wing 3 = OHem 4 = CHem 5 = THem	The default type of bending being performed for each operation in the part program. (Refer to the information for Figure 10-17 in Section 10, Manual Programming, for an explanation of the codes in the “Meaning” Column.)
D13	No Value	The default material thickness for each part program. This setting has no function in version 3.1 or earlier Orion software.
D14	No Value	The default material width for each part program. This setting has no function in version 3.1 or earlier Orion software.
D15	No Value	The default bend angle compensation table for each part program. The default may not be set in version 3.1 or earlier Orion software.

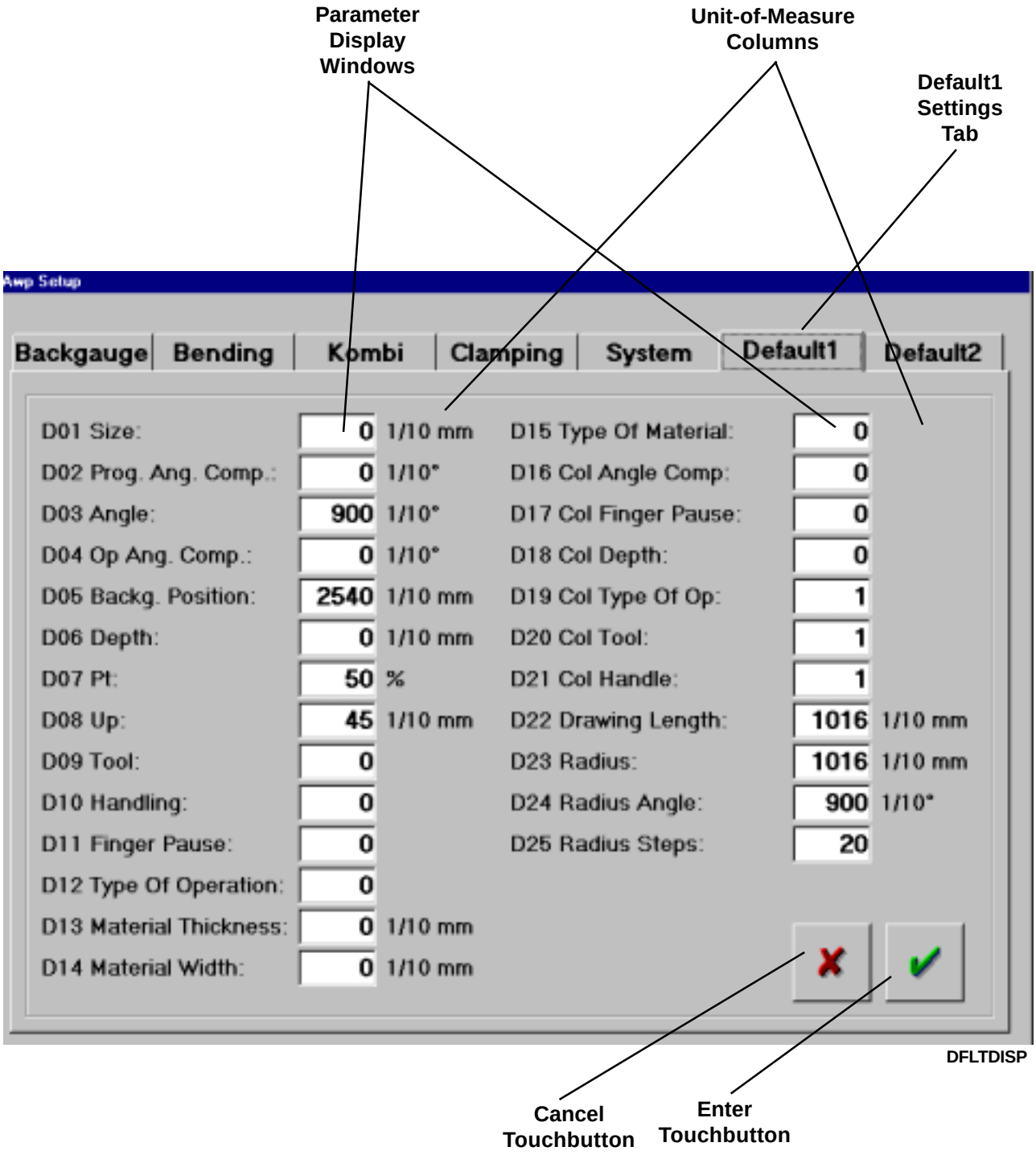


Figure 13-9. Default1 Settings Screen (continued)

Table 13-6. System Default Values (continued)

Default Value Code	Range or Meaning	Definition
D16	0 = Hide 1 = Show	Sets whether this column is displayed or not when the Run/Programming Screen is accessed for a new part program.
D17	0 = Hide 1 = Show	Sets whether this column is displayed or not when the Run/Programming Screen is accessed for a new part program.
D18	0 = Hide 1 = Show	Sets whether this column is displayed or not when the Run/Programming Screen is accessed for a new part program.
D19	0 = Hide 1 = Show	Sets whether this column is displayed or not when the Run/Programming Screen is accessed for a new part program.
D20	0 = Hide 1 = Show	Sets whether this column is displayed or not when the Run/Programming Screen is accessed for a new part program.
D21	0 = Hide 1 = Show	Sets whether this column is displayed or not when the Run/Programming Screen is accessed for a new part program.
D22	0 Min.	The default line length for each line segment in a new part profile drawing.
D23	0 Min.	The default radius size for each radius bend in a new part profile drawing.
D24	0 Min.	The default radius angle for each radius bend in a new part profile drawing.
D25	3 Min.	The default radius steps for each radius bend in a new part profile drawing.

MAKING CHANGES TO SYSTEM DEFAULT VALUES

System Default Values can be changed by those authorized to make such changes. Because system security is involved, instructions for making such changes are contained in Section 3, Security.

RETURNING TO THE MAIN SCREEN

To return to the Main Screen, touch the Cancel Touchbutton.

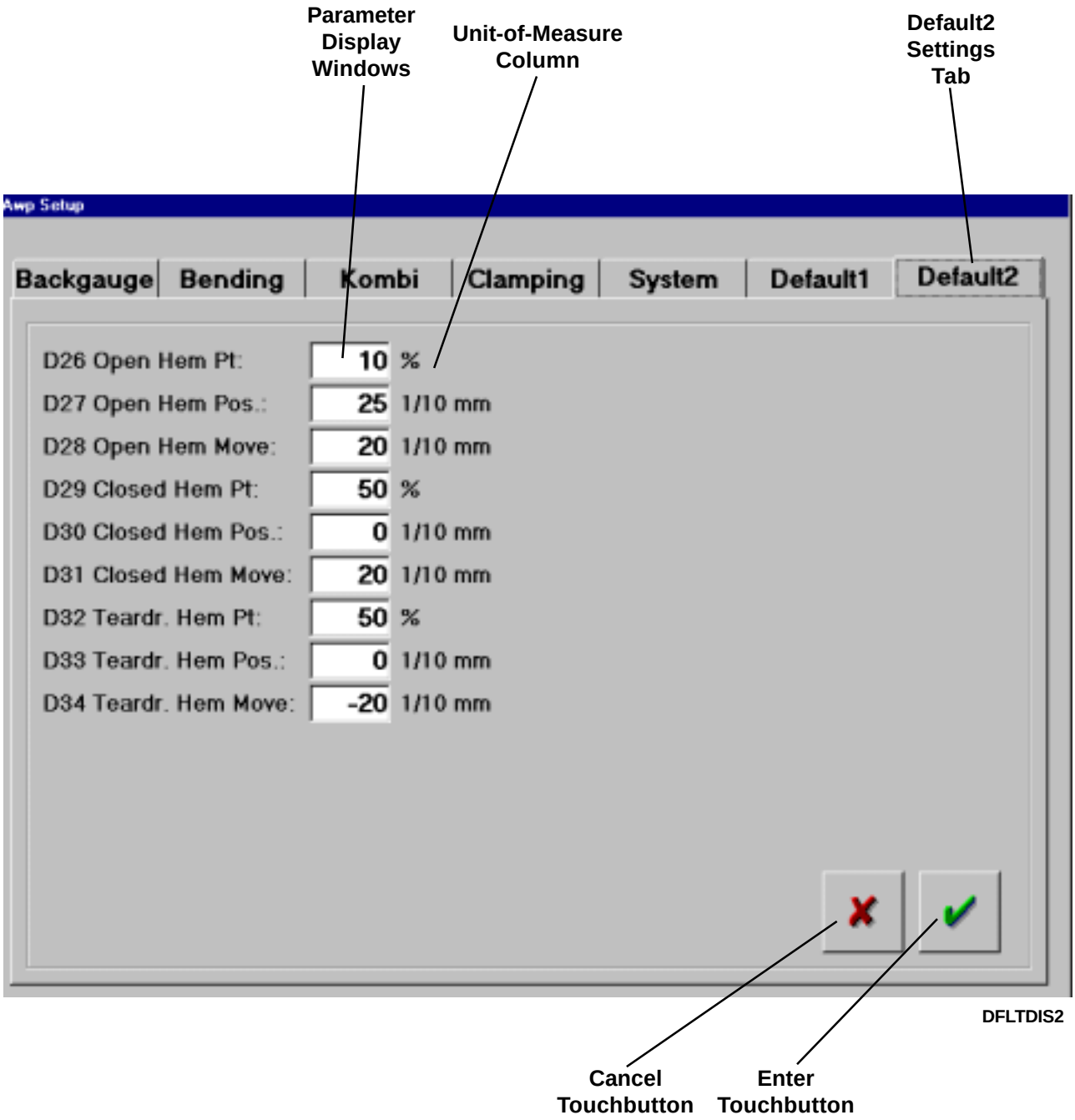


Figure 13-10. Default2 Settings Screen

DEFAULT2 SETTINGS SCREEN

The Default2 Settings Screen is a continuation of the Default1 Settings Screen which contains additional changeable default values.All the values in the Default2 Settings Screen pertain to values for hems.

Table 13-6. System Default Values (continued)

Default Value Code	Range or Meaning	Definition
D26	0 to 100	The default clamping pressure used during the formation of an open hem
D27	CB05 to CB04	The default open height of the clamp jaws at the end of the formation operation for an open hem. (Refer to Clamping Beam Settings.)
D28	0 to 100	The default repositioning of the backgauge prior to forming an open hem.
D29	0 to 100	The default clamping pressure used during the formation of a closed hem
D30	CB05 to CB04	The default open height of the clamp jaws at the beginning of the formation operation for a closed hem. (Refer to Clamping Beam. Settings.)
D31	0 to 100	The default repositioning of the backgauge prior to forming a closed hem.
D32	0 to 100	The default clamping pressure used during the formation of a teardrop hem
D33	CB05 to CB04	The default open height of the clamp jaws at the beginning of the formation operation for a teardrop hem. (Refer to Clamping Beam Settings.)
D34	0 to 100	The default repositioning of the backgauge prior to forming a teardrop hem.

MAKING CHANGES TO SYSTEM DEFAULT VALUES

System Default Values can be changed by those authorized to make such changes. Because system security is involved, instructions for making such changes are contained in Section 3, Security.

RETURNING TO THE MAIN SCREEN

To return to the Main Screen, touch the Cancel Touchbutton.