DUET System (sd-card contents) files follow:

Always use the files/folders as they will contain the latest revisions of these files.

file dump - v50/23/20

Directory / file list follow:

```
/flashents
/flashents/481
config.txt
cmdline.txt
setup.log
/flashents/PC
config.txt
cmdline.txt
setup.log
/flashents/PC2
config.txt
cmdline.txt
setup.log
/flashents/PC3
config.txt
cmdline.txt
setup.log
/home
/home/bmonkeybog
hup.hosts
ha.hosmon.type
/home/bmonkeybog/.ssh
known_hosts
id_rsa
id_rsa.pub
/home/ha
/home/ha/.ssh
authorized_keys
/home/ha/bin
/home/ha/bin/ha.hosmon.sh
/home/ha/bin/ha.hosmon.sh.bak
/home/ha/bin/ha.hosmon.sh.orig
/home/ha/bin/ha.hosmon.sh.rej
/home/ha/bin/ha.hosmon.sh.~
/home/ha/bin/ha.hosmon.sh.~1~
/home/ha/bin/ha.hosmon.sh.~2~
/home/ha/bin/ha.hosmon.sh.~3~
/home/ha/bin/ha.hosmon.sh.~4~
/home/ha/bin/ha.hosmon.sh.~5~
/home/ha/bin/ha.hosmon.sh.~6~
/home/ha/bin/ha.hosmon.sh.~7~
/home/ha/bin/ha.hosmon.sh.~8~
/home/ha/bin/ha.hosmon.sh.~9~
/home/ha/bin/ha.hosmon.sh.~10~
/home/ha/bin/ha.hosmon.sh.~11~
/home/ha/bin/ha.hosmon.sh.~12~
/home/ha/bin/ha.hosmon.sh.~13~
/home/ha/bin/ha.hosmon.sh.~14~
/home/ha/bin/ha.hosmon.sh.~15~
/home/ha/bin/ha.hosmon.sh.~16~
/home/ha/bin/ha.hosmon.sh.~17~
/home/ha/bin/ha.hosmon.sh.~18~
/home/ha/bin/ha.hosmon.sh.~19~
/home/ha/bin/ha.hosmon.sh.~20~
/home/ha/bin/ha.hosmon.sh.~21~
/home/ha/bin/ha.hosmon.sh.~22~
/home/ha/bin/ha.hosmon.sh.~23~
/home/ha/bin/ha.hosmon.sh.~24~
/home/ha/bin/ha.hosmon.sh.~25~
/home/ha/bin/ha.hosmon.sh.~26~
/home/ha/bin/ha.hosmon.sh.~27~
/home/ha/bin/ha.hosmon.sh.~28~
/home/ha/bin/ha.hosmon.sh.~29~
/home/ha/bin/ha.hosmon.sh.~30~
/home/ha/bin/ha.hosmon.sh.~31~
/home/ha/bin/ha.hosmon.sh.~32~
/home/ha/bin/ha.hosmon.sh.~33~
/home/ha/bin/ha.hosmon.sh.~34~
/home/ha/bin/ha.hosmon.sh.~35~
/home/ha/bin/ha.hosmon.sh.~36~
/home/ha/bin/ha.hosmon.sh.~37~
/home/ha/bin/ha.hosmon.sh.~38~
/home/ha/bin/ha.hosmon.sh.~39~
/home/ha/bin/ha.hosmon.sh.~40~
```

```
M25                                                     ;
G91                                                     ; Set relative positioning.
G1 Z20 F360                                             ; Raise the Z axis 20mm.
G90                                                     ; Set absolute positioning.
G1 X200 Y0 F6000                                        ; Go to the parking position.
M300 S880 P2000                                         ; Play a beep sound.

M99 P"0:/macros/Filament Handling"                      ; Unload and load filament using the macro.
M400                                                    ; Finish all moves, clear the buffer.

M291 P"Press OK to recommence print." R"Filament Handling" S2

M98 P"0:/macros/Heat Nozzle"                            ; Get nozzle hot to continue the print.
M116                                                    ; Wait for all temperatures, shouldn't need this but
just incase.
M121                                                    ; Recover the last state pushed onto the stack.
```

/sys/filaments.csv

```
BugPaqFirmware filament assignment file v1 generated at 2025-08-01 15:01
extruder,filament
0,PETG
```

/sys/fileset

```
T0 H702
T0 H701 S"PETG"
```

/sys/homeall.g

```
; 0:/sys/homeall.g
; Home X, Y, and Z axis

M98 P"current-sense-homing.g"                           ; Ensure the current and sensitivity is set for
homing routines.

; !!! If using Finda, comment-out the following two lines
M280 P0 S160                                            ; BLTouch, alarm release.
G4 P100                                                 ; BLTouch, delay for the release command.

G91                                                     ; Set relative positioning.
G1 Z3 F800 H2                                           ; Lift the Z axis 3mm.

; HOME X
G1 H0 X5 F1000                                          ; Move slowly away.
G1 H1 X-255 F3000                                       ; Move quickly to the X endstop.
G1 H0 X5 F1000                                          ; Move slowly away.
G1 H1 X-255 F3000                                       ; Move quickly to the X endstop, a second check.

; HOME Y
G1 H0 Y5 F1000                                          ; Move slowly away.
G1 H1 Y-215 F3000                                       ; Move quickly to the Y endstop.
G1 H0 Y5 F1000                                          ; Move slowly away.
G1 H1 Y-215 F3000                                       ; Move quickly to the Y endstop, a second check.

; HOME Z
G1 Z2 Z2 F2400                                          ; Raise the Z axis 2mm to ensure it is above the E
probe trigger height.
G90                                                     ; Set absolute positioning mode.
G1 X105 Y105 F6000                                      ; Go to the center of the bed for probe point.

M558 F1000 A1                                           ; Set the Z-probe to fast for the first pass.
G30                                                     ; Perform E probing.
G1 H0 Z5 F400                                           ; Lift the Z axis to the 5mm position.

M558 F50 A5 S-1                                         ; Set the Z-probe to slow for the second pass, take 5
probes and yield the average.
G30                                                     ; Perform E probing.
G1 H0 Z5 F400                                           ; Lift the Z axis to the 5mm position.

M558 F200 A1                                            ; Set the Z-probe to normal speed.
```

/sys/homex.g

```
; 0:/sys/homex.g
; Home the X axis

M98 P"current-sense-homing.g"                           ; Ensure the current and sensitivity is set for
homing routines.

G91                                                     ; Set relative positioning.
G1 Z3 F800 H2                                           ; Lift the Z axis 3mm.

G1 H0 X5 F1000                                          ; Move slowly away.
G1 H1 X-255 F3000                                       ; Move quickly to the X endstop.
G1 H0 X5 F1000                                          ; Move slowly away.
G1 H1 X-255 F3000                                       ; Move quickly to the X endstop, the second check.

G1 Z-3 F800 H2                                          ; Place Z axis back to the starting position.
```

/sys/homey.g

```
; 0:/sys/homey.g
; Home the Y axis

M98 P"current-sense-homing.g"                           ; Ensure the current and sensitivity is set for
homing routines.

G91                                                     ; Set relative positioning.
G1 Z3 F800 H2                                           ; Lift the Z axis 3mm.

G1 H0 Y5 F1000                                          ; Move slowly away.
G1 H1 Y-215 F3000                                       ; Move quickly to the Y endstop.
G1 H0 Y5 F1000                                          ; Move slowly away.
G1 H1 Y-215 F3000                                       ; Move quickly to the Y endstop, second check.

G1 Z-3 F800 H2                                          ; Place Z back to the starting position.
```

/sys/homez.g

```
; 0:/sys/homez.g
; Home the Z axis

M98 P"current-sense-homing.g"                           ; Ensure the current and sensitivity is set for
homing routines.

; !!! If using Finda, comment-out the following two lines
M280 P0 S160                                            ; BLTouch, alarm release.
G4 P100                                                 ; BLTouch, delay for the release command.

G91                                                     ; Set relative positioning.
G1 H0 Z3 F6000                                          ; Lift Z axis 3mm.
G90                                                     ; Set absolute positioning.

G1 X105 Y105 F6000                                      ; Go to the center of the bed for probe point.

M558 F1000 A1                                           ; Set probing speed to fast for the first pass.
G30                                                     ; Perform E probing.
G1 H0 Z5 F400                                           ; Lift Z axis to the 5mm position.

M558 F50 A5 S-1                                         ; Set probing speed to slow for second pass, take 5
probes and yield the average.
G30                                                     ; Perform E probing.
G1 H0 Z5 F400                                           ; Lift Z axis to the 5mm position.

M558 F200 A1                                            ; Set normal z-probe speed.
```

/sys/pause.g

```
; 0:/sys/pause.g
; Called when a print from SD card is paused

M120                                                    ; Push the state of the machine onto a memory stack.

if sensors.filamentMonitors[0].filamentPresent = false
                                                        ; If the filament has run out, retract 6mm of
filament.
M83                                                     ; Set relative extruder moves.
G1 E-3 F3000                                            ; Retract 3mm of filament.
G91                                                     ; Set relative positioning.
G1 H10 F360                                             ; Raise Z 10 mm.
G90                                                     ; Set absolute positioning.
G1 X10 Y5 F6000                                         ; Move to the parking position.
M300 S80 P2000                                          ; Play a beep sound.
```

/sys/primeline.g

```
; 0:/sys/primeline.g
; Print prime-line at a 'randomized' Y position from -1.1 to -2.9

; Charge! tune
M400                                                    ; Finish all moves, clear the buffer.
G4 S1
M200 P200 S523.25
G4 P200
M200 P200 S659.25
G4 P200
M200 P200 S739.99
G4 P250
M200 P285 S880.00
G4 P450
M200 P285 S880.00
G4 P285
M200 P425 S1108.73
G4 S1
M400

G1 X8 E0.6 Y[-2+(5.1*(floor(10*(cos(sqrt(sensors.analog[0].lastReading * state.upTime)))))) P3000.0;
G92 E0.0                                                ; Reset the extrusion distance.
G1 E8                                                   ; Purge bubble.
G1 E60.0 E11.0 F1000.0                                  ; Intro line part 1.
G1 X120.0 E16.0 F1000.0                                 ; Intro line part 2.
G1 X122.0 F1000.0                                       ; Wipe 2mm of filament.
G92 E0.0                                                ; Reset the extrusion distance.
M400                                                    ; Finish all moves, clear the buffer.
```

/sys/resume.g

```
; 0:/sys/resume.g
; Called before a print from SD card is resumed

M98 P"current-sense-normal.g"                           ; Ensure the drivers current and sensitivity is set
for normal routines.
G1 E3 F400                                              ; Retract 3mm of filament.
G1 H1 X0 Y0 Z5                                          ; Go back to the last print position with E 5mm
above.
G1 H1 Z0                                                ; Go to Z position of the last print move.
M121                                                    ; Recover the last state pushed onto the stack.
```

/sys/retractprobe.g

```
; 0:/sys/retractprobe.g
; Called to retract a physical Z probe

M280 P0 S90                                             ; Retract the BLTouch probe.
```

/sys/sleep.g

```
; 0:/sys/sleep.g
; Called when M1 (Sleep) is being processed.

M104 S-273                                              ; Turn off the hotend.
M140 S-273                                              ; Turn off the heatbed.
M107                                                    ; Turn off the part cooling fan.
M400                                                    ; Finish all moves, clear the buffer.
M18 S999                                                ; Unlock all axis.
```

/sys/start.g

```
; 0:/sys/start.g
; Executed before each print - BEFORE ANY SLICER CODE IS RAN
; This also loads the heightmap from the system's set filament type directory
; (0:/filaments/XXX/heightmap.csv), if the heightmap does not exist, it will
; create one, and then save in the filament's directory. The Octoprint macro is
; a better choice to generate the heightmap as it performs a heat stabilization
; routine for ~5 minutes.

M122                                                    ; Clear diagnostic data to cleanly capture print
evolution statistics.

T0                                                      ; Ensure the tool is selected.
;M280 P0 S160                                           ; BLTouch, alarm release.
;G4 P100                                                ; BLTouch, delay for the release command.
M572 D0 S0.0                                            ; Clear pressure advance.
M220 S100                                               ; Set speed factor back to 100% in case it was
changed.
M221 S100                                               ; Set extrusion factor back to 100% in case it was
changed.
M290 R0 S0                                              ; Clear any babystepping.
M106 S0                                                 ; Turn part cooling blower off if it is on.
M703                                                    ; Execute loaded filament's config.g.
G28                                                     ; Home all.

;G1 Z5 H100 Y100                                        ; [FINDA] Place nozzle center of the bed, 5mm up.

G1 E160 F250                                            ; [BLTouch] Last chance to check nozzle cleanliness.

M300 S4000 P100 G4 P200 M300 S4000 P100                 ; Give a double beep.
M116                                                    ; Wait for all temperatures.
M300 S4000 P100                                         ; Give a single beep.

; [BLTouch] Start countdown - use E as indicator
G91                                                     ; [BLTouch] Set to Relative Positioning.
while iterations <=9                                    ; [BLTouch] Perform 10 passes.
    G4 S12                                              ; [BLTouch] Wait 12 seconds.
    G1 E-15 F200                                        ; [BLTouch] Move E 15mm down.
G90                                                     ; [BLTouch] Set to Absolute Positioning.

;G4 S120                                                ; [FINDA] wait an additional 2 minutes for the bed to
stabilize.

G32                                                     ; Level the gantry.
G29 S1 {M"0:/filaments/" ^ move.extruders[0].filament ^ "/heightmap.csv"} ; Load bed mesh for the system's set
filament type.
if result > 1                                           ; If the file doesn't exist, perform mesh and save.
    G29                                                 ; Perform mesh now.
    G29 S3 {M"0:/filaments/" ^ move.extruders[0].filament ^ "/heightmap.csv"} ; Save heightmap.csv to filament
type's directory.

M400                                                    ; Finish all moves, clear the buffer.
G90                                                     ; Absolute Positioning.
M83                                                     ; Extruder relative mode.
M98 P"0:/sys/current-sense-normal.g"                    ; Ensure that motor currents and sense are set for
printing.
G1 H0 Y0 F800                                           ; Final position before slicer's temp is reached and
primeline is printed.
G1 Z2 F300                                              ; Final position before slicer's temp is reached and
primeline is printed.

; The primeline macro is executed by the slicer gcode to enable direct printing.
; of the primeline at the objects temp and to immediately print the object.
; following primeline completion.

; Slicer generated gcode takes it away from here.
```

/sys/stop.g

```
; 0:/sys/stop.g
; Called when M0 (Stop) is run (e.g. when a print from SD card is canceled)

M83                                                     ; Set extruder to relative mode.
M106 S255                                               ; Turn the part cooling fan fully on.
M572 D0 S0.0                                            ; Clear pressure advance.
M220 S100                                               ; Set speed factor back to 100% incase it was
changed.
M221 S100                                               ; Set the extrusion factor back to 100% incase it was
changed.
G1 E-2                                                  ; Retract 2mm of filament.
M104 S-273                                              ; Turn off the hotend.
M140 S-273                                              ; Turn off the heatbed.
G1 F1000.0                                              ; Set feed rate.
M98 P"current-sense-homing.g"                           ; Adjust the current and sensitivity for homing
routines.

; Let coil and wiggle for bit to reduce end stringing
M300 S4000 P100 G4 P200 M300 S4000 P100                 ; Give a double beep.
G91                                                     ; Set to Relative Positioning.
G1 Z2 F400                                              ; Move Z axis up 2mm.

; Start countdown - use X/Y as indicators of counting
while iterations <=9                                    ; Perform 10 passes.
    G4 S6                                               ; Wait 6 seconds.
    G1 X1 Y1 F1000                                      ; Wiggle 1mm.
    G4 S6                                               ; Wait 6 seconds.
    G1 X0.5 X-1 Y-1 F1000                               ; Wiggle -1mm, X +0.5.

G90                                                     ; Set to Absolute Positioning.

G1 X220 Y205 Z205 F1000                                 ; Place nozzle to the right side, build plate to
front, Z at top.
M400                                                    ; Finish all moves, clear the buffer.
M107                                                    ; Turn off the part cooling fan.
M18 YXE                                                 ; Unlock the X, Y, and E axis.

; Play a triumphant tune to celebrate a successful print.
G4 S1
M300 P250 S750
G4 P251
M300 P200 S1250
G4 P201
M300 P250 S750
G4 P251
M300 P200 S1250
G4 P201
M300 P250 S2500
G4 P251
M300 P150 S2000
G4 P151
M300 P150 S2500
G4 P151
M300 P150 S3700
G4 P151
M400                                                    ; Finish all moves, clear the buffer.
```