New Model Types

Sixteen new model types for ContinuousLoad Trendsetters.

```
TSCL>> config
Current Model
-------------
Trendsetter II 800 Quantum V ContinuousLoad [TSCL8_V]
Available Models
----------------
Code        Description
----------------------------------------
TS8_SE      Trendsetter II 800 S
TS8_FE      Trendsetter II 800 F
TS8_VE      Trendsetter II 800 V
TS4_S       Trendsetter II 400 Quantum S
TS4_V       Trendsetter II 400 Quantum V
TS8_S       Trendsetter II 800 Quantum S
TS8_F       Trendsetter II 800 Quantum F
TS8_V       Trendsetter II 800 Quantum V
SP4LSE      Trendsetter II 400 S Manual Spectrum
SP4LFE      Trendsetter II 400 F Manual Spectrum
SP4LVE      Trendsetter II 400 V Manual Spectrum
  :                :
  :                :
SP8LS       Trendsetter II 800 Quantum S Manual Spectrum
SP8LF       Trendsetter II 800 Quantum F Manual Spectrum
SP8LV       Trendsetter II 800 Quantum V Manual Spectrum
SP8RS       Trendsetter II 800 Quantum S Spectrum
SP8RF       Trendsetter II 800 Quantum F Spectrum
SP8RV       Trendsetter II 800 Quantum V Spectrum
PS8R        Proofsetter Spectrum
TSAL8_SE    Trendsetter II 800 S Autoloader
TSAL8_FE    Trendsetter II 800 F Autoloader
TSAL8_VE    Trendsetter II 800 V Autoloader
TSAL4_S     Trendsetter II 400 Quantum S Autoloader
TSAL4_V     Trendsetter II 400 Quantum V Autoloader
TSAL8_S     Trendsetter II 800 Quantum S Autoloader
TSAL8_F     Trendsetter II 800 Quantum F Autoloader
TSAL8_V     Trendsetter II 800 Quantum V Autoloader
TSCL8_SE    Trendsetter II 800 S ContinuousLoad
TSCL8_FE    Trendsetter II 800 F ContinuousLoad
TSCL8_VE    Trendsetter II 800 V ContinuousLoad
TSCL4_S     Trendsetter II 400 Quantum S ContinuousLoad
TSCL4_V     Trendsetter II 400 Quantum V ContinuousLoad
TSCL8_S     Trendsetter II 800 Quantum S ContinuousLoad
TSCL8_F     Trendsetter II 800 Quantum F ContinuousLoad
TSCL8_V     Trendsetter II 800 Quantum V ContinuousLoad
SPCL8R_SE   Trendsetter II 800 S Spectrum ContinuousLoad
SPCL8R_FE   Trendsetter II 800 F Spectrum ContinuousLoad
SPCL8R_VE   Trendsetter II 800 V Spectrum ContinuousLoad
SPCL4R_S    Trendsetter II 400 Quantum S Spectrum ContinuousLoad
SPCL4R_V    Trendsetter II 400 Quantum V Spectrum ContinuousLoad
SPCL8R_S    Trendsetter II 800 Quantum S Spectrum ContinuousLoad
SPCL8R_F    Trendsetter II 800 Quantum F Spectrum ContinuousLoad
SPCL8R_V    Trendsetter II 800 Quantum V Spectrum ContinuousLoad
NEWS50      Trendsetter II NEWS 50
NEWS70      Trendsetter II NEWS 70
NEWS100     Trendsetter II NEWS 100
NEWS150     Trendsetter II NEWS 150
NEWS200     Trendsetter II NEWS 200
TSMCE       Trendsetter II Default
```

New CL Operator Prompts

For ContinuousLoad: **TSCL>>**
For Spectrum ContinuousLoad: **TSCLSP>>**
For ContinuousLoad engineering: **TSCLENG>>**
For Spectrum ContinuousLoad engineering: **TSCLSPENG>>**

New CL Option

ContinuousLoad option only available after the a CL configuration has been selected.
Spectrum option only available after a SP or SPCL configuration has been selected.

```
TSCL>> option
Available Options
-----------------
    ContinuousLoad option is enabled
           Rotator option is disabled
        Film-guide option is enabled
     Unload-offset option is disabled
    Separator-arms option is disabled
ProcessorInterface option is disabled
         Preloader option is disabled
         No-buzzer option is disabled
      Debris UDRCB option is enabled
      Debris UDRCL option is disabled
```

New Commands “picker cups <in|out>” and “picker pvac <on|off>”

```
TSCL>> help picker
  picker                          Display picker status
  picker init                     Initialize the picker
  picker pick                     Pick a plate
  picker <up|down|dn>             Move picker up or down
    <up|down|dn>
  picker <up|down|dn> [w]         ..and wait for sensor
    <up|down|dn>
  picker cups <in|out>            Move loader cups in or out
    <in|out>
  picker cups <in|out> [w]        ..and wait for sensor
    <in|out>
  picker <pvac|powervac> <on|off>  Turn picker powervac on or off
    <pvac|powervac>
    <on|off>
  picker vac <on|off>             Turn picker vacuum on or off
    <on|off>
  picker vac <on|off> [w]         ..and wait for valid reading
    <on|off>
  picker step                     Step through an picker sequence
  picker step <enable|disable>    Enable or disable picker single-stepping
    <enable|disable>              <enable|disable>
  picker fail                     Picker fail on step status
  picker fail <string>            Set the string for picker to fail on
    <string>                      <fail string>
  picker cancel                   Picker cancel, for picker commands only
  picker resume                   Picker resume, for picker commands only
  picker eject                    Picker eject, for picker commands only
  picker release                  Picker release, for picker commands only
```

New Output for “picker status”

```
TSCL>> picker
Task     Initialized Sim mode State        Abort Fault   Step mode Aborted
-------------------------------------------------------------------------
picker   False       Disabled Idle         0             Disabled  False

Picker Up/Down Actuator status:
     Sensor up                          =     Blocked
     Sensor down                        =     Unblocked
     Drive up                           =     On
     Drive down                         =     Off
     Drive matches Sensors              =     True

Picker Cups In/Out Actuator status:
     Sensor in                          =     Unblocked
     Drive in                           =     Off
     Drive out                          =     Off
     Drive matches Sensors              =     False (!)

Plate Stack Sensor status:
     Plate Stack Sensor                 =     Unblocked

Picker Vacuum and Powervac status:
     PowerVacOn Drive                   =     Off
     VacuumOn Drive                     =     Off
     VacuumOff Drive                    =     Off
     Vacuum Pressure                    =     0 counts
     Vacuum Threshold                   =     low
```

New Command “statuslights”

```
TSCL>> help statuslights
  statuslights                    Display current status lights status
  statuslights <blue|bluef|green|greenf|yellowf|off>
                                  Control the status lights
    <blue|bluef|green|greenf|yellowf|off>
```

Using the **statuslights** command will override any current state of the lights. During normal operation, more than one state can be active at a time – for instance, could be imaging (green) and requesting operator to load a plate (blue). Only blue will be shown. Statuslights have a priority as follows:

Priority (highest to lowest)	Statuslight	Meaning
1	Flashing yellow	Suspend
2	Solid blue	Waiting for operator to load media
3	Flashing blue	Waiting for operator to remove media
4	Flashing green	Media is unloading
5	Solid green	Imaging or Media is loading

New CL Specific I/O

This I/O is specific to the ContinuousLoad device – this includes the CL's picker AND the exit door (note that EDR_Drive and EDR_SensorClosed no longer show up. However "edoor <open|close>" is still used to control the door).

```
TSCLENG>> scan cl
Bit Name                  State  Group                  Bit Mask
CL_SensorLoaderDoorClosed  1 b DI_Group3               00000004h
CL_&SensorLoaderCupsIn     1 b DI_ALE_0100            00001000h
CL_&SensorLoaderDown       1 b DI_ALE_0100            00002000h
CL_SensorLdTablePlateHome ~0 b DI_ALE_0106            00000200h
CL_SensorLdTablePlateAway ~0 b DI_ALE_0106            00000400h
CL_SensorLoaderCupsIn     ~1 b DI_ALE_0106            00001000h
CL_SensorLoaderDown       ~1 b DI_ALE_0106            00002000h
CL_SensorLoaderUp         ~0 b DI_ALE_0106            00004000h
CL_LoaderVacuumOnDrive     0   DO_ALE_0000            00000100h
CL_LoaderVacuumOffDrive    0   DO_ALE_0000            00000200h
CL_LoaderCupsOutDrive      0   DO_ALE_0000            00004000h
CL_LoaderPowerVacOnDrive   0   DO_ALE_0000            00008000h
CL_LoaderCupsInDrive       0   DO_ALE_0000            00020000h
CL_LoaderStatusLEDGreen    0   DO_ALE_0000            00100000h
CL_LoaderDoorOpenDrive     0   DO_ALE_0000            00200000h
CL_LoaderStatusLEDYellow   0   DO_ALE_0000            04000000h
CL_LoaderDoorCloseDrive    0   DO_ALE_0000            08000000h
CL_LoaderStatusLEDBlue     0   DO_ALE_0000            20000000h
CL_LoaderUpDrive           0   DO_ALE_0000            40000000h
CL_LoaderDownDrive         0   DO_ALE_0000            80000000h
```

Autoloader I/O Still Used by CL

All the I/O for the unload table and processor are the same.

```
TSCL>> scan al
Bit Name                  State  Group                  Bit Mask
AL_&Processor              1 b DI_ALE_0103            00000001h
AL_&TravellerHomeAway     ~1 b DI_ALE_0103            00000004h
AL_&PickerVacuum           1 b DI_ALE_0103            00000040h
AL_&UnloadMotor            1 b DI_ALE_0103            00002000h
AL_ProcessorBusy          ~0 b DI_ALE_0106            00000001h
AL_ProcessorReady         ~0 b DI_ALE_0106            00000002h
AL_ProcessorFault         ~0 b DI_ALE_0106            00000004h
AL_ProcessorSpare         ~0   DI_ALE_0106            00000008h
AL_SensorTableExitHome    ~0 b DI_ALE_0106            00000010h
AL_SensorTableEntryAway   ~0 b DI_ALE_0106            00000020h
AL_SensorTableEntryHome   ~0 b DI_ALE_0106            00000040h
AL_SensorTableCupsDown    ~1 b DI_ALE_0106            00000080h
AL_SensorRotatorRetract   ~1 b DI_ALE_0106            00000100h
AL_SensorTableDown        ~0xb DI_ALE_0106            00010000h
AL_SensorTableUp          ~0 b DI_ALE_0106            00020000h
AL_SensorTableExitAway    ~0 b DI_ALE_0106            00040000h
AL_SensorRotatorRotate    ~0 b DI_ALE_0106            00080000h
AL_SensorTravellerRotate   0 b DI_ALE_0106            00100000h
AL_SensorTravellerHome     0   DI_ALE_0109            00000020h
AL_SensorTravellerAway     0   DI_ALE_0109            00000040h
AL_UnloadTableUpDrive      0   DO_ALE_0000            00001000h
AL_UnloadTableDownDrive    0   DO_ALE_0000            00002000h
AL_PusherDrive             0   DO_ALE_0000            00010000h
AL_UnloadVacuumOnDrive     0   DO_ALE_0000            00400000h
```

```
AL_UnloadVacuumOffDrive    0   DO_ALE_0000              00800000h
AL_RotatorRotateDrive      0   DO_ALE_0000              01000000h
AL_RotatorUnrotateDrive    0   DO_ALE_0000              02000000h
```

I/O Not Used by CL

All I/O for Autoloader load table (picker, plate cover, wrist, etc.) and the Base's EDR I/O are removed.

```
AL_SensorCoverClosed
AL_SensorPickerOutUp
AL_SensorPickerOutDown
AL_SensorPickerWristOut
AL_SensorSeparatorRetract
AL_SensorPlateStackHome
AL_SensorPlateStackAway
AL_CoverUnlockDrive
AL_PickerVacuumOnDrive
AL_PickerVacuumOffDrive
AL_PickerInDrive
AL_PickerOutDrive
AL_SeparatorInDrive
AL_PickerUpDrive
AL_PickerDownDrive
AL_AirKnifeOnDrive
AL_PickerWristInDrive
EDR_Drive
EDR_SensorClosed
```

Loading of Plates from Service Shell

From ServiceShell, you load the bay, and then issue the **load bay** command (just as on AL):

```
TSCL>> bay 1 load 20 m 813 s 1118 t 305

TSCL>> load bay 1                        ← Still requires a button press

TSCL>> unload
```

For manual loads, it is also the same as an AL device:

```
TSCL>> load manual m 813 s 1118 t 305

TSCL>> unload
```