

# **Leitch Controller**

*V3Ctlch.exe*

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# 1 Overview

## 1.1 Description

The BNCS module V3CTLCH.EXE allows ApplCore panels and other CSI Clients to control the individual levels within a Leitch (or HEDCO) router.

## 1.2 BNCS configuration

This driver is compatible with configuration paths set in 'bncs\_config.ini' and CC environment variables

Leitch router levels are represented by single digit numbers starting from zero. The CTL\_LCH.INI file contains a list for mapping the Leitch level numbers into BNCS driver numbers. There are a total of 26 possible levels (0 - 25).

## 1.3 Resilience and redundancy

Additional instances of the driver can be run on the network to provide backup in the event of a comms or workstation failure. If any level of the controlled router system fails to respond to background polling that level (device) is flagged as 'broken' and a network NB message issued. The controller will remain in TxRx mode and the aggregated level alarm status is used to determine whether the driver goes RxOnly if requested by CSI, as the result of background messages from another instance of the driver inquiring to go TxRx. The time taken for the drivers to changeover will be dependant on the number of drivers running on the main and backup workstations and their respective settings of the CSI 'TxRxRetryPeriod' (see CSI.ini and its documentation).

# 2 Driver setup

When V3CTLCH.EXE starts up it looks for a CTL\_LCH.INI file in the configuration path set by the CC environment variables (V4) or 'bncs\_config ini' (V3). If not found the file is created with default values and the driver will complain that there are no ID's defined. This file contains the mapping of Leitch level numbers into BNCS driver numbers. V3CTLCH then searches for the DEV\_xxx.INI files for each of these router drivers and extracts details of router size, together with all the database names. From BNCS all the routers appear as their respective driver numbers and as such the operation from ApplCore panels is identical to using GRD.EXE. Putting the CTL\_LCH.INI file into simulate provides an effective router simulator. Note the DEV\_xxx.INI files are used by CTL\_LCH.EXE for their database names and sizes, however the individual 'Simulation' flags are ignored. i.e. if the 'Simulation' option in the CTL\_LCH.INI file is set to 1 then all the routers appear to be in simulate.

## 2.1 Sample Ini

```
[Controller]
Name=Leitch Controller
ParkName=- -
SaveDelay=10
TallyDelay=1000
DebugMode=0
SourceToDest=1
DestToSource=0
NameLength=8
Simulation=0
StatusInfoDriverId =0

ManUnAcks=5

Com=2
Speed=9600
DataBits=8
```

```

StopBits=1
Parity=N

[Levels]
Level_0=1
Level_1=13
Level_2=37
Level_3=0
Level_4=0
Level_5=0
.....etc...
Level_25=0

[StatusSlots]

StatusSlot_0=0
StatusSlot_1=0
StatusSlot_2=0
StatusSlot_3=0
.....etc...
StatusSlot_25=0

```

## 3 Notes

Control of the driver is available locally and works in similar way to GRD.EXE. The Leitch controller driver has the facility to select each of the router frames individually.

The comms status of each router frame can be used to update a central 'status' infodriver with '1 or 0' for alarms monitoring etc. Edit the 'StatusInfoDriverId' entry to the required device ID and assign a unique 'StatusSlot' for each router device to be monitored.

MaxUnAcks is an option to modify the number of un-acknowledged poll messages before comms fail is flagged. As the alarm status for each level is stored separately the MaxUnAcks value needs to be less than the minimum number of destinations on any level.

Version 3.00.00 of V3CtlLch is a 32bit driver and requires V3CSI or later

## 4 Version history

### 4.1 Driver version

Version No	Date	Details	Name
3.00.00	27/02/06	Converted to V3	
3.01.00	16/05/07	Built from CVS	
3.01.01	23/09/09	Added Tx/Rx resilience. V3/V4 path mods	Steve Lowe
3.01.02	14/10/09	NetBroken messages issued for each failed level (device). Redundant CSI Link label changed to display the aggregated level status. Bug fix to level comms status. TxRx/RxOnly changeover now managed by CSI and asserted to all controlled devices. MaxUnAcks setting implemented for small routers.	Steve Lowe
3.01.03	15/10/09	Bug fix - replace hard coded MaxUnAcks value	Steve Lowe
3.02.01	29/04/15	Added diagnostic messages for test release to help sort problems	Steve Jensen

3.02.02	20/05/15	Corrections for comm problems	Steve Jensen
3.02.03	12/06/15	More corrections for comm problems	Steve Jensen
3.02.04	17/06/15	Correction for comm blinking status	Steve Jensen
3.02.05	25/06/15	Added OutputDebugString() based messages to aid in debugging comm state issues.	Steve Jensen
3.02.06	26/06/15	Disabled comm debug message.	Steve Jensen

## 4.2 Document version

Version No	Date	Details	Name
	Feb 09	Updated template	A Atkin
1.0.0.1	23/09/09	Imported and updated text from V2 doc	Steve Lowe
1.0.0.2	14/10/09	Resilience section revised and notes updated	Steve Lowe

