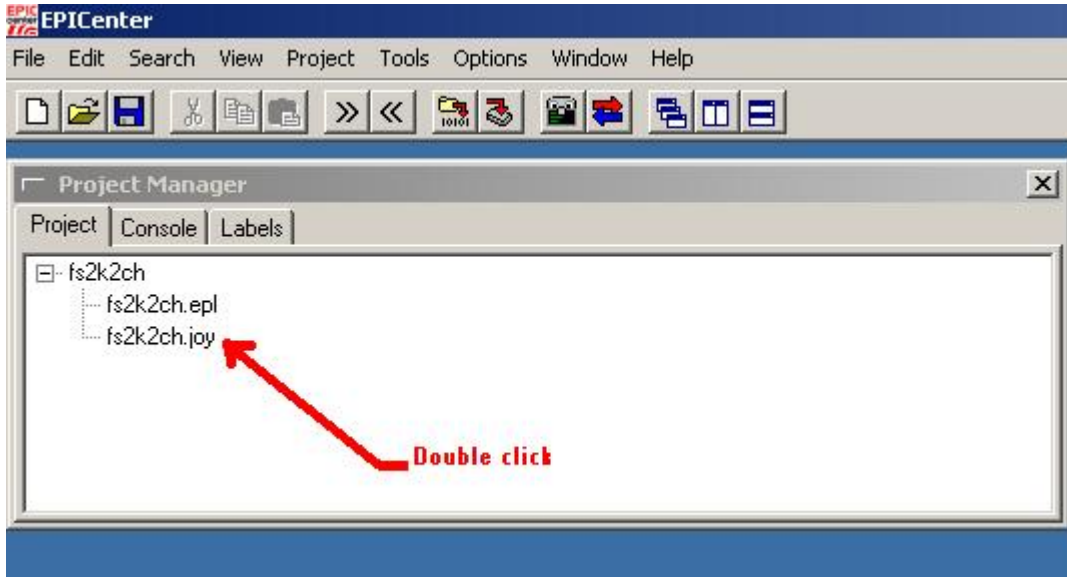


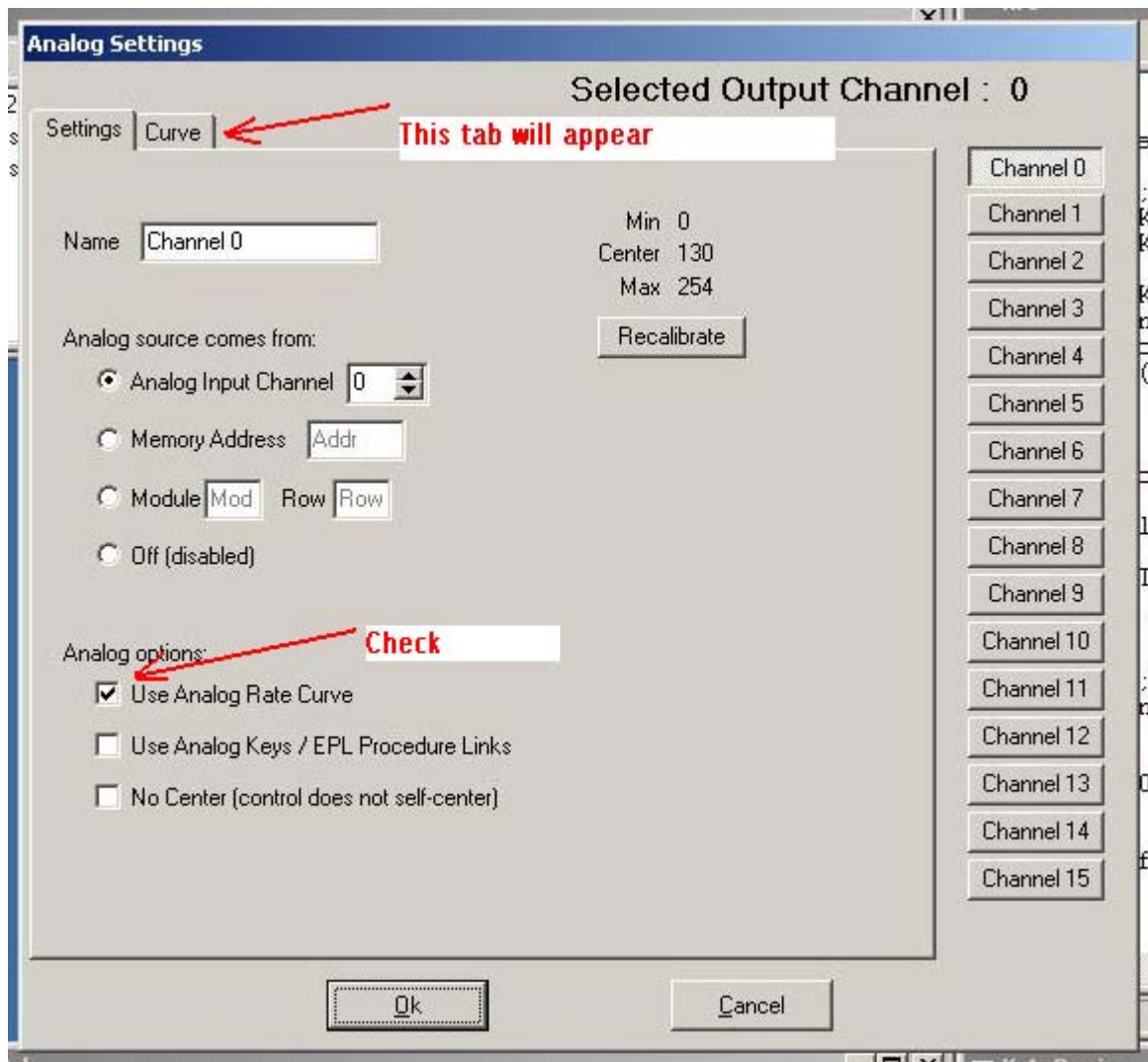
# Analog Rate curves, keystrokes and Procedure Linking

Analogs can generate keystrokes, link to EPL procedures and have response altered by rate curves.

Open Project window and double click <project>.joy



Check "Use analog rate curve" the "curve" tab will appear



Check "Symetric". This is the normal case. When editing the left side of the curve from the center, the right side will become symmetric. For non-symmetric curves leave this unchecked.

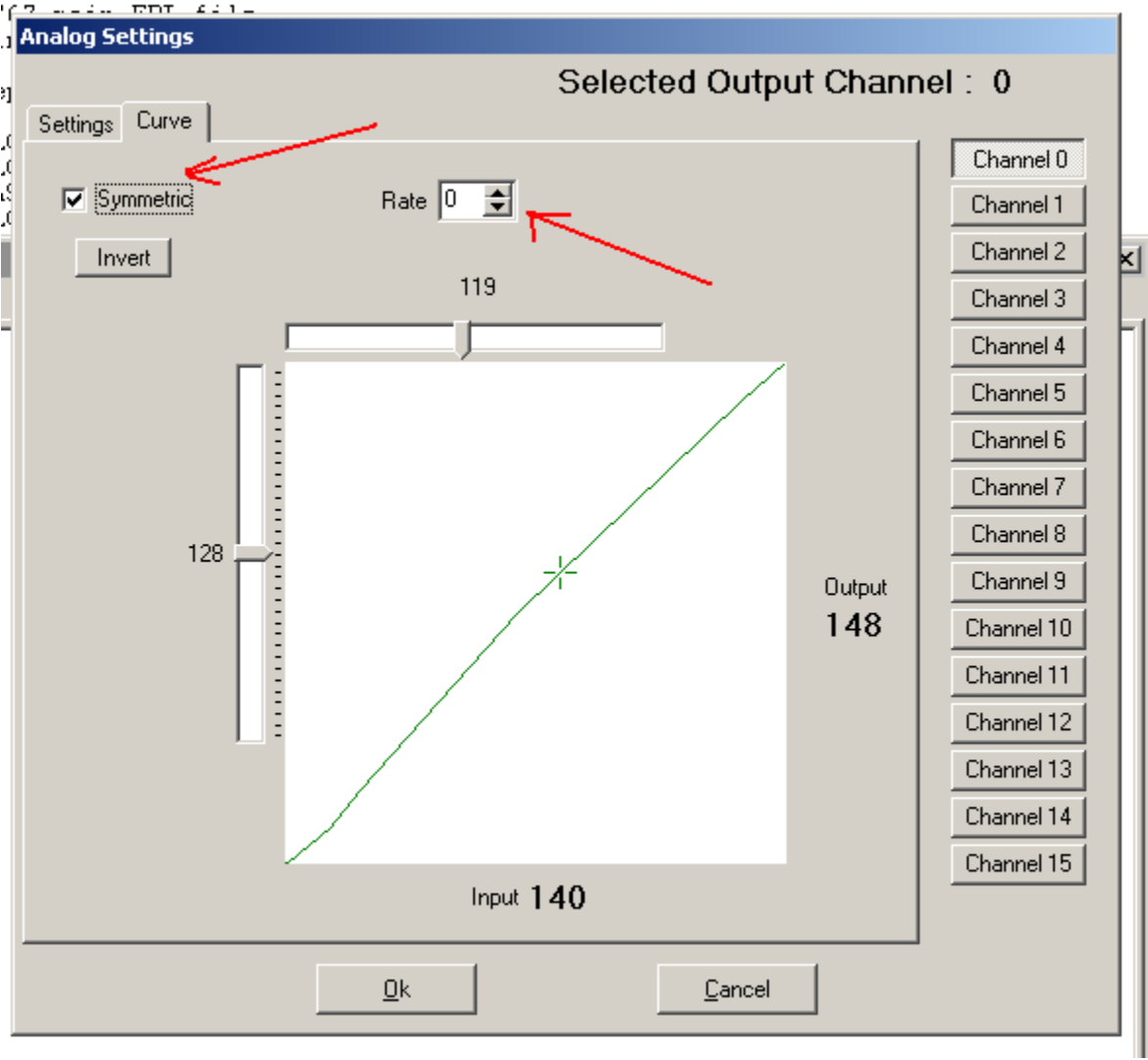
Select the rate number to edit.

This will **NOT** attach this rate to this analog.

You have to use (normally in the :INIT{ ...} procedure ):

DeviceName.AnalogName.rate\_index = xx; where xx is the rate to use.

Note that the "+" is at the current position of the analog.



To edit this curve

Analog Settings

Selected Output Channel : 0

Settings Curve

Symmetric

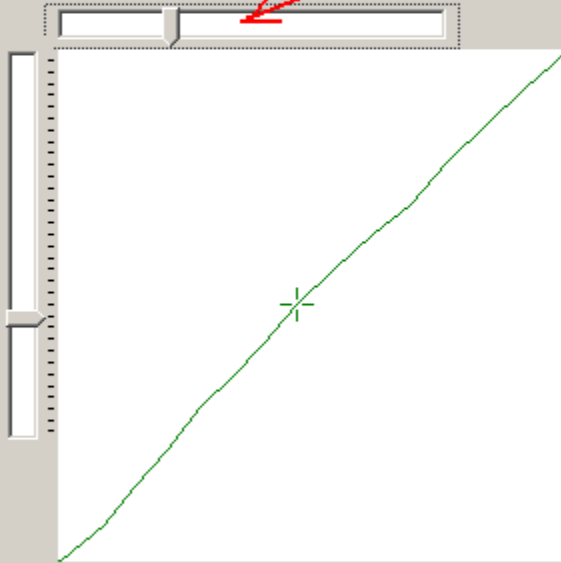
Rate 0

Invert

71

Slide to position to edit

77



Output  
128

Input 119

Channel 0

Channel 1

Channel 2

Channel 3

Channel 4

Channel 5

Channel 6

Channel 7

Channel 8

Channel 9

Channel 10

Channel 11

Channel 12

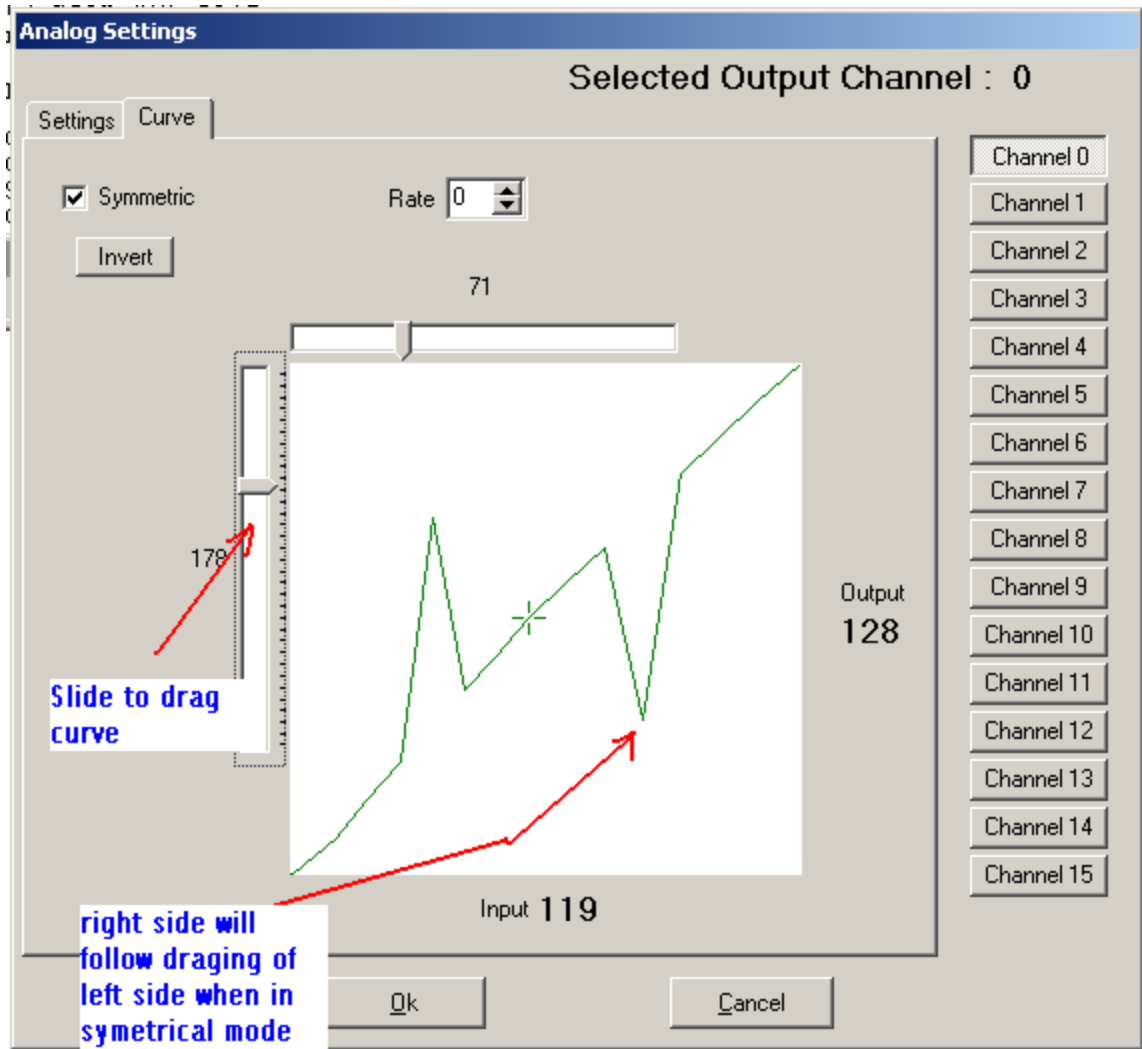
Channel 13

Channel 14

Channel 15

Ok

Cancel



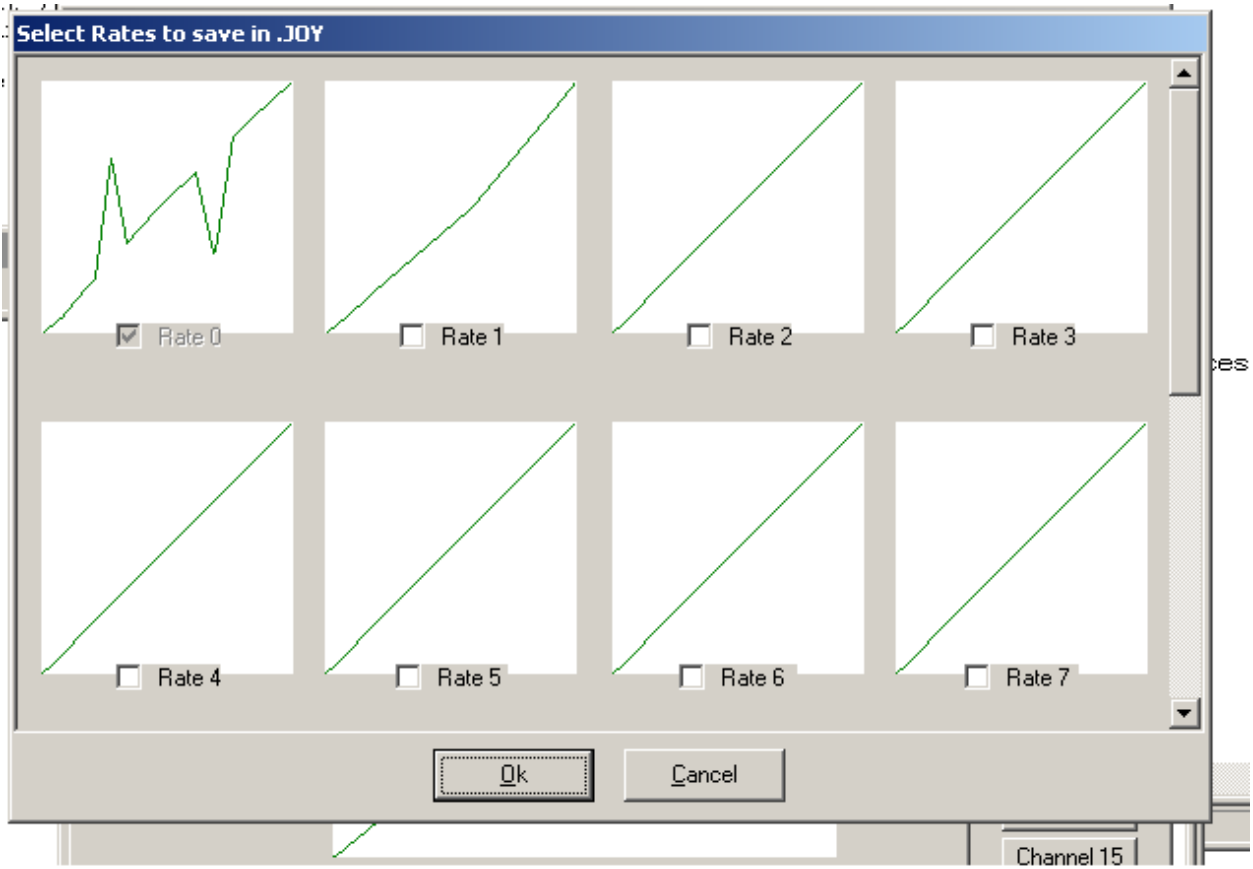
Clicking "Invert" button will reverse curve.

Curve can also be reversed by:

```
DeviceName.AnalogName.flags |= REVERSE;
```

REVERSE is #defined in EPICHID.INC and is equal to bit 3 = 1 in flags.

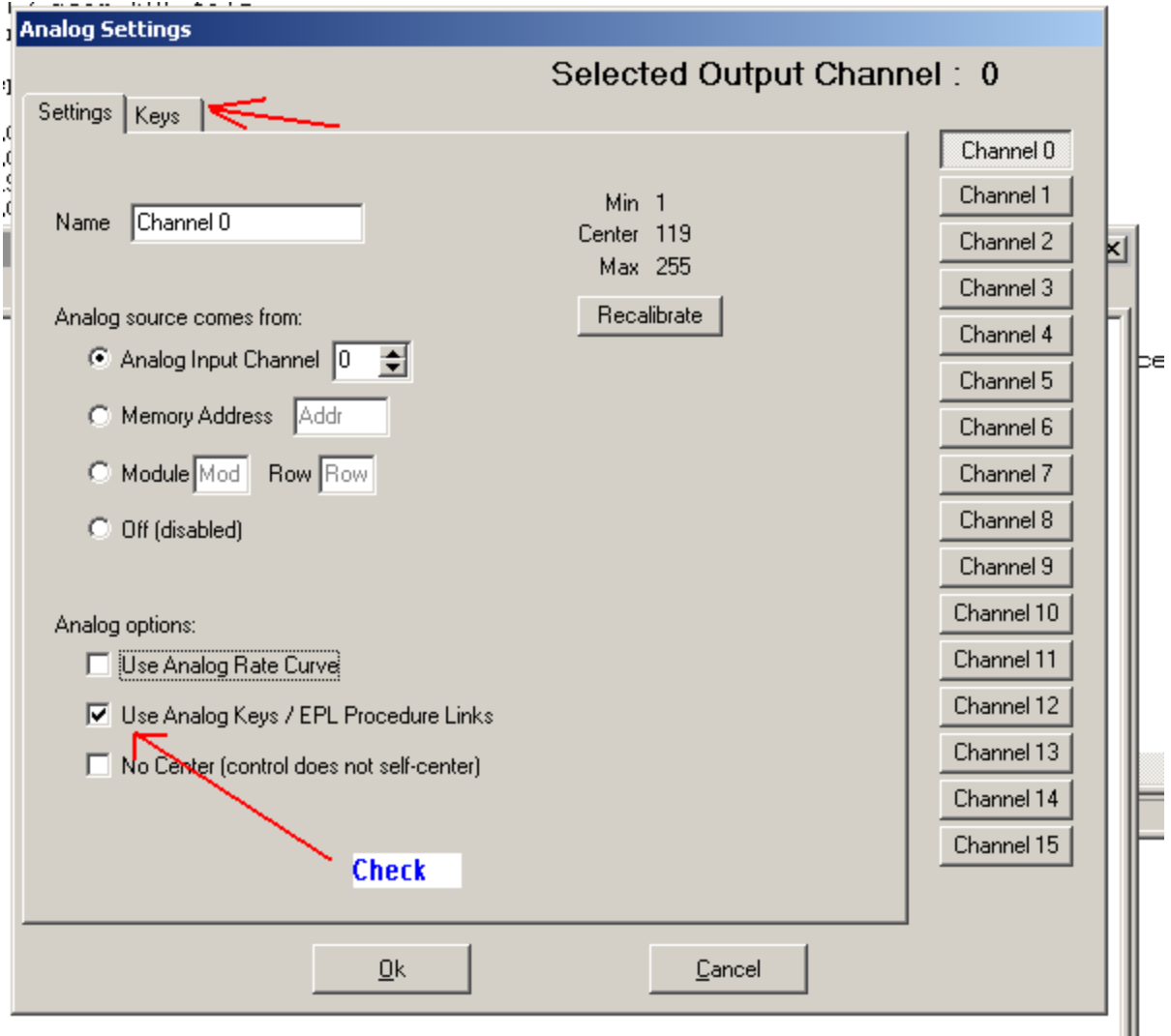
When finished editing, click "OK"



Click "Ok" to save the checked rate curves.  
F9 to compile.

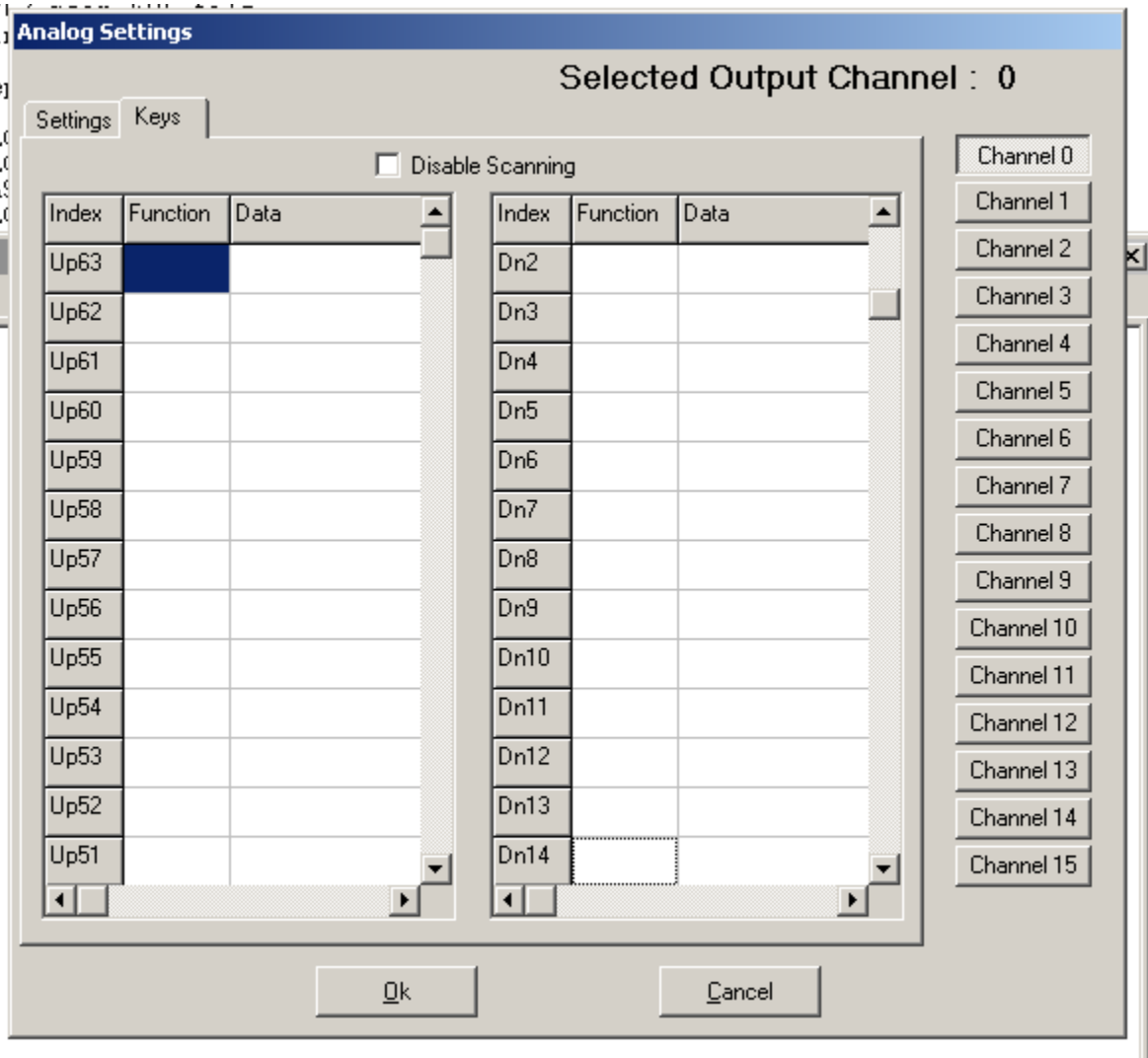
## Generating Keystrokes from analog position

Double click .JOY from project manager Project tab  
Check "Use Analog Keys / EPL Procedure Links", The "Keys" tab will appear.

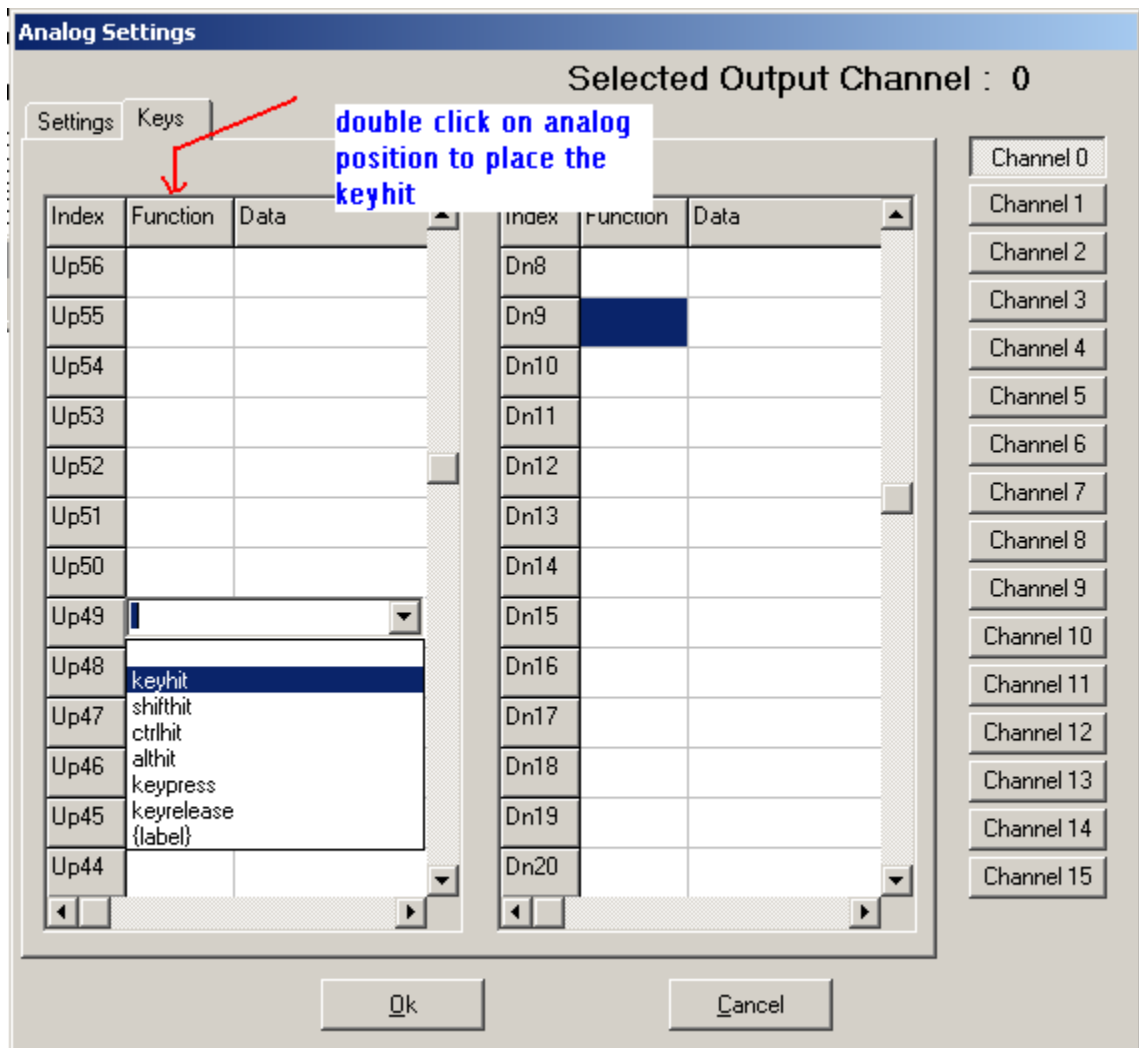


Click "Keys" tab

**Note:** Selected Output Channel should be "Input channel"




Note that when the analog is going up the scroll bar and box will follow on the left side and when going down will follow on the right side. To keep the analog from interfering check "Disable Scanning", if needed. Double click on the position to place the keystroke, or procedure link



Select keyhit. Double click the "Data" box and select the key.

### Analog Settings

Selected Output Channel : 0

Settings Keys 

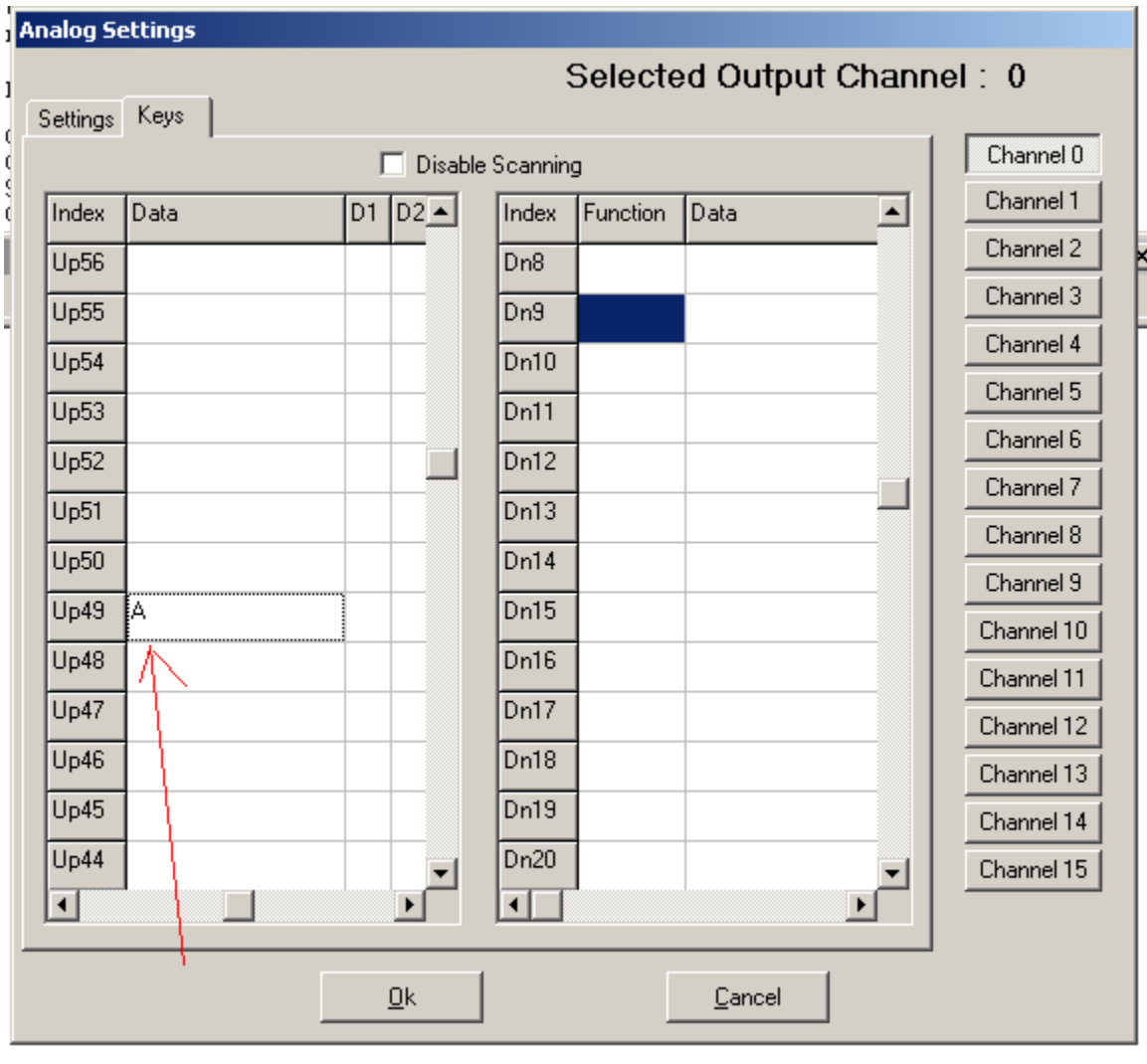
Disable Scanning

Index	Data	D1	D2
Up56			
Up55			
Up54			
Up53			
Up52			
Up51			
Up50			
Up49			
Up48	0		
Up47	1		
Up46	2		
Up45	3		
Up44	4		
	5		
	6		
	7		
	8		
	9		
	A		
	ALT		
	APOSTROPHE		
	B		
	BACKSLASH		
	BKSPC		
	C		
	CAPSLOCK		
	CNTR		
	COMMA		
	CTRL		
	D		
	DEL		

Index	Function	Data
Dn8		
Dn9		
Dn10		
Dn11		
Dn12		
Dn13		
Dn14		
Dn15		
Dn16		
Dn17		
Dn18		
Dn19		
Dn20		

Channel 0  
Channel 1  
Channel 2  
Channel 3  
Channel 4  
Channel 5  
Channel 6  
Channel 7  
Channel 8  
Channel 9  
Channel 10  
Channel 11  
Channel 12  
Channel 13  
Channel 14  
Channel 15

Cancel



Now whenever the analog is going in the up direction and hits this point a “keyhit(A)” will be executed.

To link to an EPL procedure, double click on the “Function” for the position and select {label} , double click the “Data” box and a drop down of EPL procedures will appear. Select the procedure to execute.

### Analog Settings

Selected Output Channel : 0

Settings Keys

Disable Scanning

Index	Data	D1	D2	Index	Data	D1	D2
Up56				Dn8			
Up55				Dn9			
Up54				Dn10	ExtCOM		
Up53				Dn11	ExtNAV		
Up52				Dn12	F_0		
Up51				Dn13	F_1		
Up50				Dn14	F_15		
Up49	A			Dn15	F_2		
Up48				Dn16	F_20		
Up47				Dn17	F_25		
Up46				Dn18	F_30		
Up45				Dn19	F_40		
Up44				Dn20	F_5		

- ExtCOM
- ExtNAV
- F\_0
- F\_1
- F\_15
- F\_2
- F\_20
- F\_25
- F\_30
- F\_40
- F\_5
- Failures
- FLCH
- FOCanc
- FullNAV
- INIT
- LFuelFlowOff
- LNAVoff
- LNAVon
- machholdoff
- machholdon
- Major\_Sys\_Fail
- Map\_ArptOff
- Map\_Navaid
- Map\_NavaidOff
- Map\_Rte
- Map\_RteOff
- Map\_VOR
- Map\_VORoff
- Map\_Wpt.Off

Channel 0

Channel 1

Channel 2

Channel 3

Channel 4

Channel 5

Channel 6

Channel 7

Channel 8

Channel 9

Channel 10

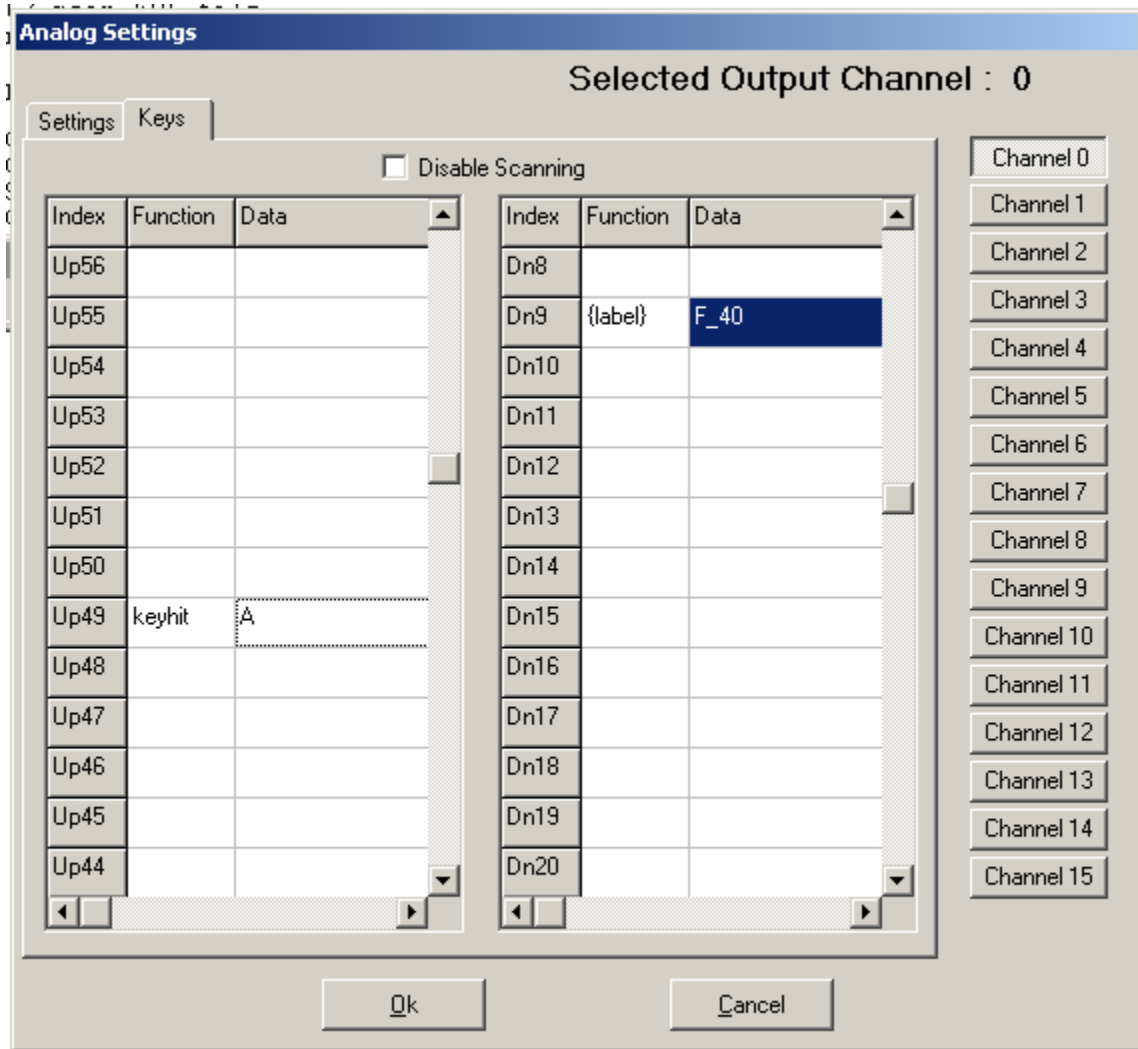
Channel 11

Channel 12

Channel 13

Channel 14

Channel 15



Now whenever this analog is going in the down direction and hits this position EPL procedure F\_40 will be executed.

Click "Ok" to save, Ok at rate curve save screen, F9 to compile, F10 to load.