

## LDK6000 and 6200 reference and SD delay adjustments

### Reference delay:

The BS can be synchronized with HD Trilevel sync or SD Blackburst reference (BB)

Both references can be fine adjusted with timing.

There is always a delay in the SD output in respect to the HD output.

If Trilevel sync is used, the HD output is in time with the Trilevel sync.

Timing can be fine adjusted.

= Menu>System>Timing>H phase course, H phase fine.

If BB reference is used, the SD output is in time with the BB reference. (Factory default)

Resulting in that the HD output is advanced in time in respect to the BB reference.

Instead the HD output can be adjusted in time with the BB reference.

The delay between HD and SD outputs remains the same after this adjustment.

Enter the BS menu in the service mode:

= Menu>Monitoring>Menu>Menu level>Inst>Servicemode>Exec> yes

Adjust the BB timing:

= Menu>System>Timing>Shift>Pixel high, Pixel low, Lines high, Lines low

The above adjustment must be done for each Videomode 1080i50, 1080i59, 720p50 and 720p59 separately. The last setting for each of these modes will be memorized individually.

### SD output delay:

The SD output is delayed in respect to the HD output. (See 6000-re2.pdf)

The SD output can be further delayed up to both outputs are synchronous, but will be delayed 1 frame. The delay adjustment range is from the minimal processing delay to more than 1 frame

The HD output remains timed to the reference.

Enter the BS menu in the service mode:

= Menu>Monitoring>Menu>Menu level>Inst>Servicemode>Exec> yes

After factory delivery:

Fixed minimum delay between HD and SD outputs.

=Menu>SDTV>Timing>comp

Adjust the SD delay:

=Menu>SDTV>Timing>Var

=Menu>SDTV>Timing>Sync Shift Pixels, Sync Shift Lines

The above adjustment must be done for each videomode 1080i50, 1080i59, 720p50 and 720p59 separately. The last setting for each of these modes will be memorized individually.

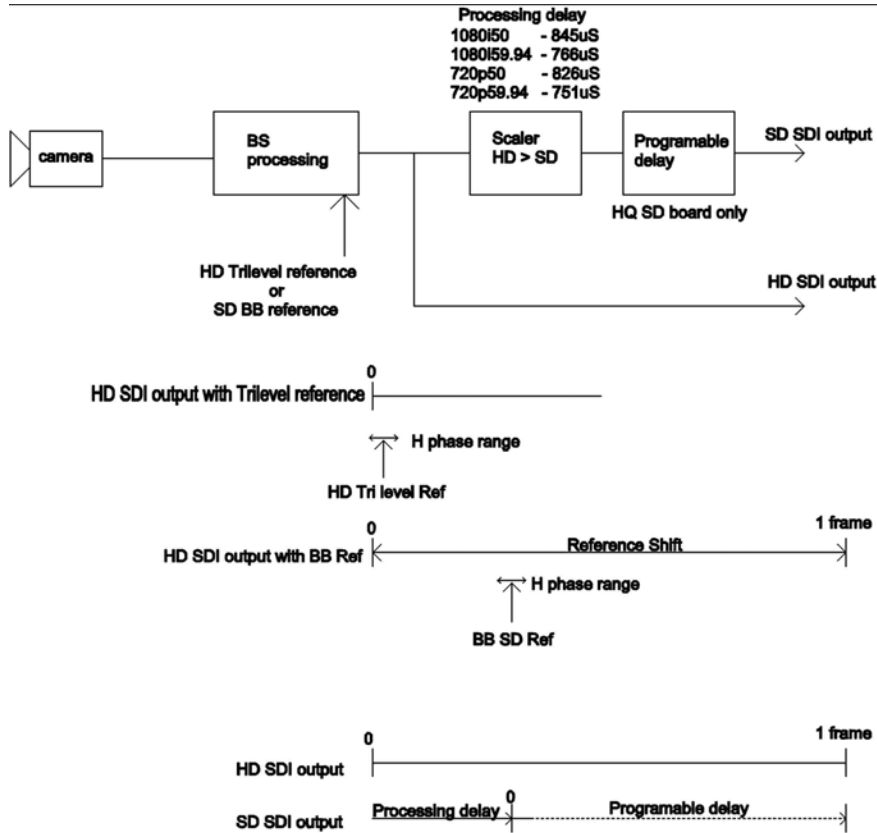
The HD trilevel sync does not contain the NTSC 2 frame or PAL 4 frame sequence information and therefore will be random. If this is required BB reference must be used.

Note 1: in older models SDTV board the SD output delay is not possible to adjust.

Old: LDK4531/20 or 3922 406 88721

New: LDK4531/30 or 3922 406 50041

Note 2: The CVBS viewing output is a non-broadcast standard output and is not part of the above-mentioned SD outputs.



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## Default factory:

### Settings:

**SDTV board 3922 406 88721 en 3922 406 50041 Without extra delay**

	Pix High	Pix Low	Lines High	Lines Low	
1080i 50	0	163	0	9	PAL
1080i 59	3	6	0	12	NTSC
1080i 59-23	3	6	0	12	NTSC

1080 psf 23	3	6	0	12	NTSC *
1080 psf 24	3	6	0	12	PAL *
1080 psf 25	0	163	0	9	PAL
1080 psf 29	3	6	0	12	NTSC

720P 50	1	5	0	10	PAL
720P 59	2	208	0	13	NTSC
720P 59-23	2	208	0	13	NTSC
720P 50-25	1	5	0	10	PAL
720P 59-29	2	208	0	13	NTSC

### Settings:

**SDTV board 3922 406 88721 en 3922 406 50041 met 10 HD-lines extra delay**

	Pix High	Pix Low	Lines High	Lines Low	
1080i 50	2	131	0	14	PAL
1080i 59	1	234	0	17	NTSC
1080i 59-23	1	234	0	17	NTSC

1080 psf 23	x	x	x	x	NTSC *
1080 psf 24	x	x	x	x	PAL *
1080 psf 25	2	131	0	14	PAL
1080 psf 29	1	234	0	17	NTSC

720P 50	1	149	0	14	PAL
720P 59	1	37	0	17	NTSC
720P 59-23	1	37	0	17	NTSC
720P 50-25	1	149	0	14	PAL
720P 59-29	1	37	0	17	NTSC

**NOTE: Settings defined with H-timing at "22"**