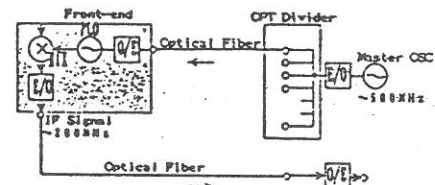
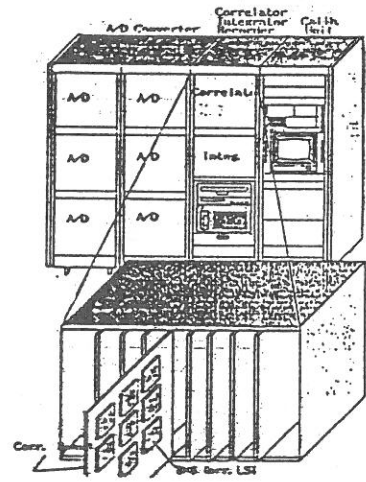
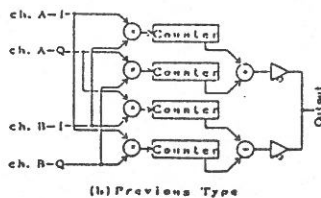
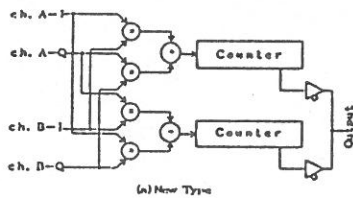
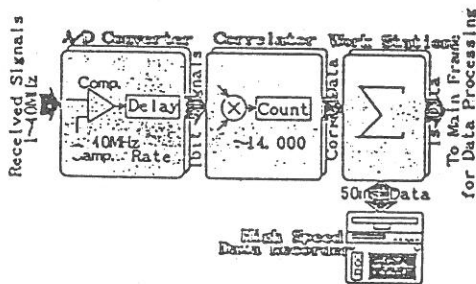
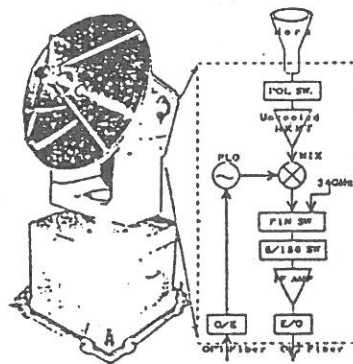
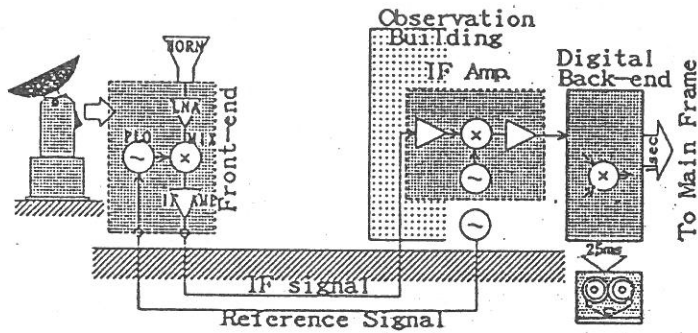


Receiver of the Nobeyama Radioheliograph

M Nishio

and

the Nobeyama Radioheliograph Group



Temp. Coefficient of Fiber: 0.2 ppm
Temp. Variation of 1.5m depth: 0.1°C(rms)
Max. Cable Length: 300 m
Phase Variation: 0.17 deg(rms) at 170Kz

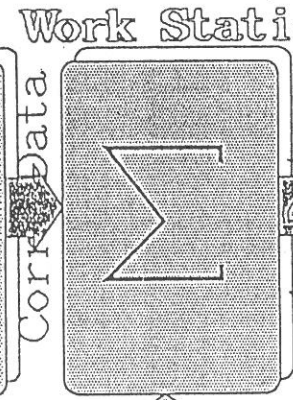
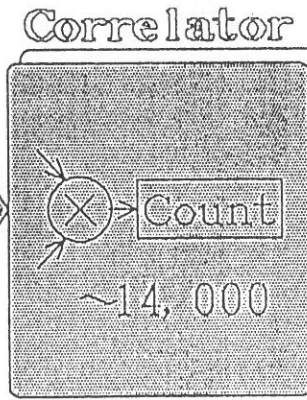
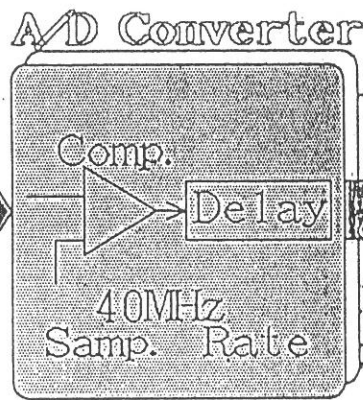
Specification of the Receiver

Observing Frequency	17 GHz
Bandwidth	40 MHz
Polarization	RCP & LCP (Time Shearing)
Temporal Resolution	50 ms & 1 s.
Receiver Noise Temp.	≤300 K
Phase Variation	≤3 deg
Gain Variation	≤0.2 dB
Accuracy of Pol. Degree	≤1 %
Cross-talk between Rec. Channels	≤-40 dB
Dynamic Range of Image	100:1 (Snap Shot) 1000:1 (Synthesis)

A Schedule of Receiver Manufacturing

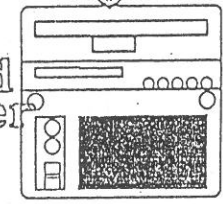
	1990	1991
Front-end	12 1 2 3 4 5 6 7 8 9 10 11 12	
IF Amp		
Digital Back-end		
Optical Filters		

Received Signals
1~40MHz



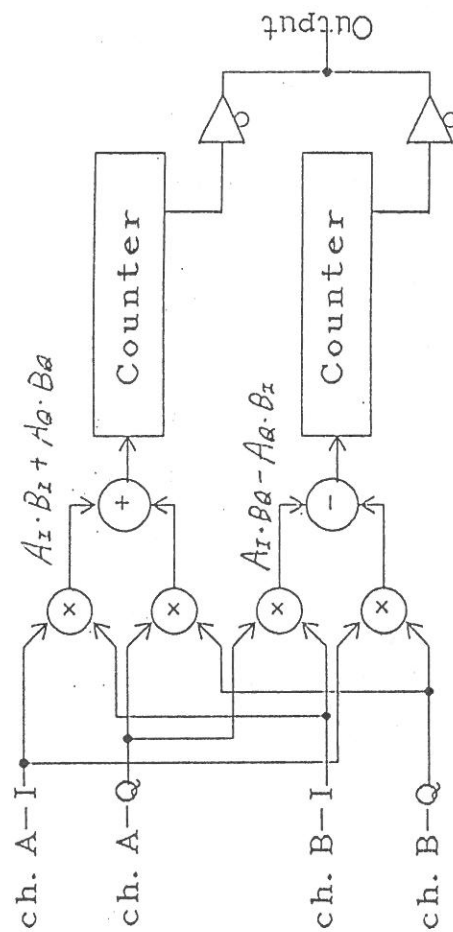
To Main Frame
for Data Processing

High Speed
Data Recorder

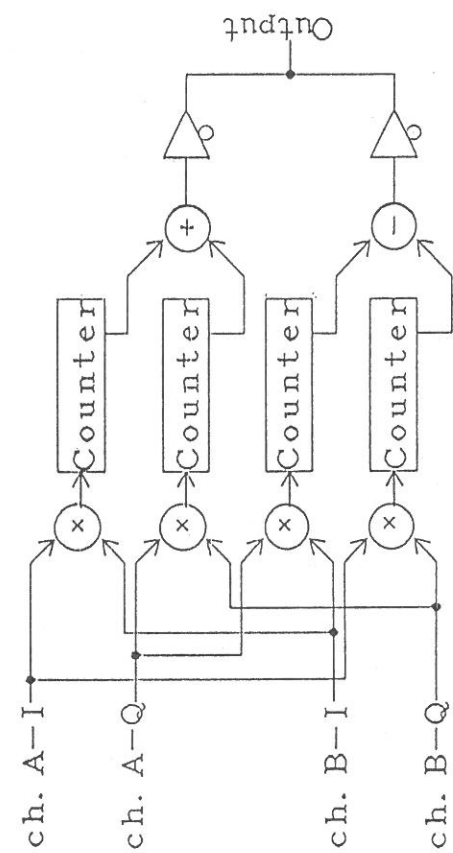


50ms Data

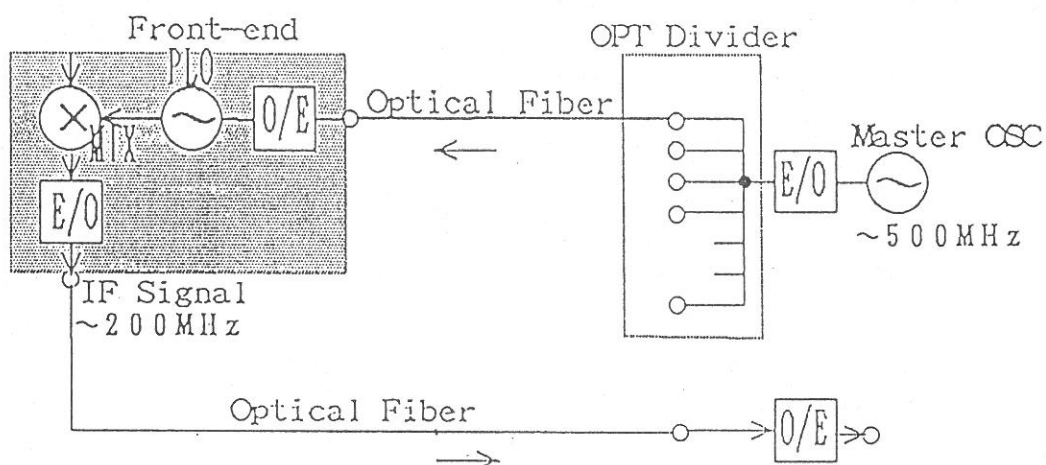
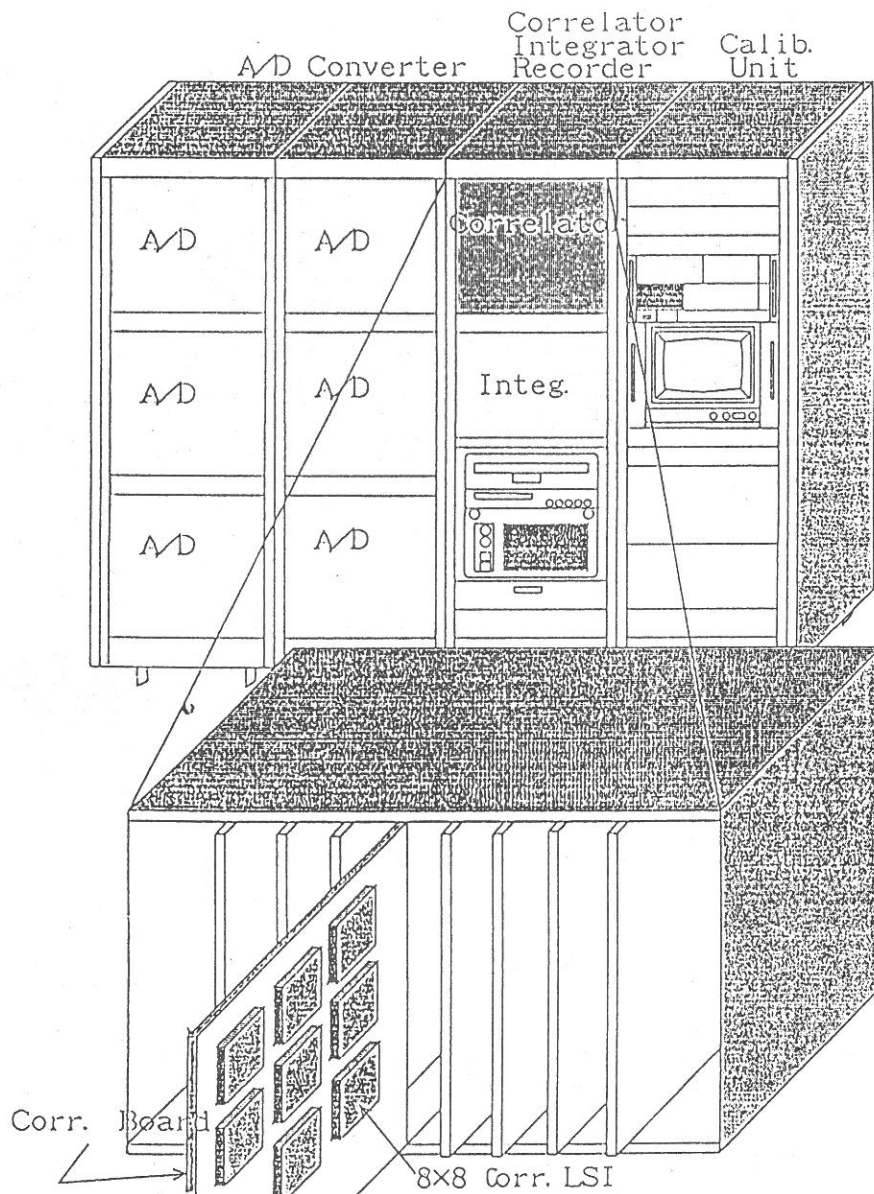
10MHz clock rate
→ 40MHz effective clock rate
 $T = 25\text{-nsec.}$



(a) New Type



(b) Previous Type

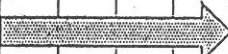
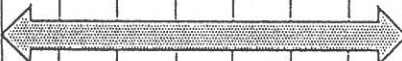
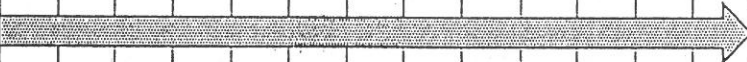
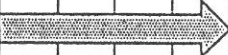


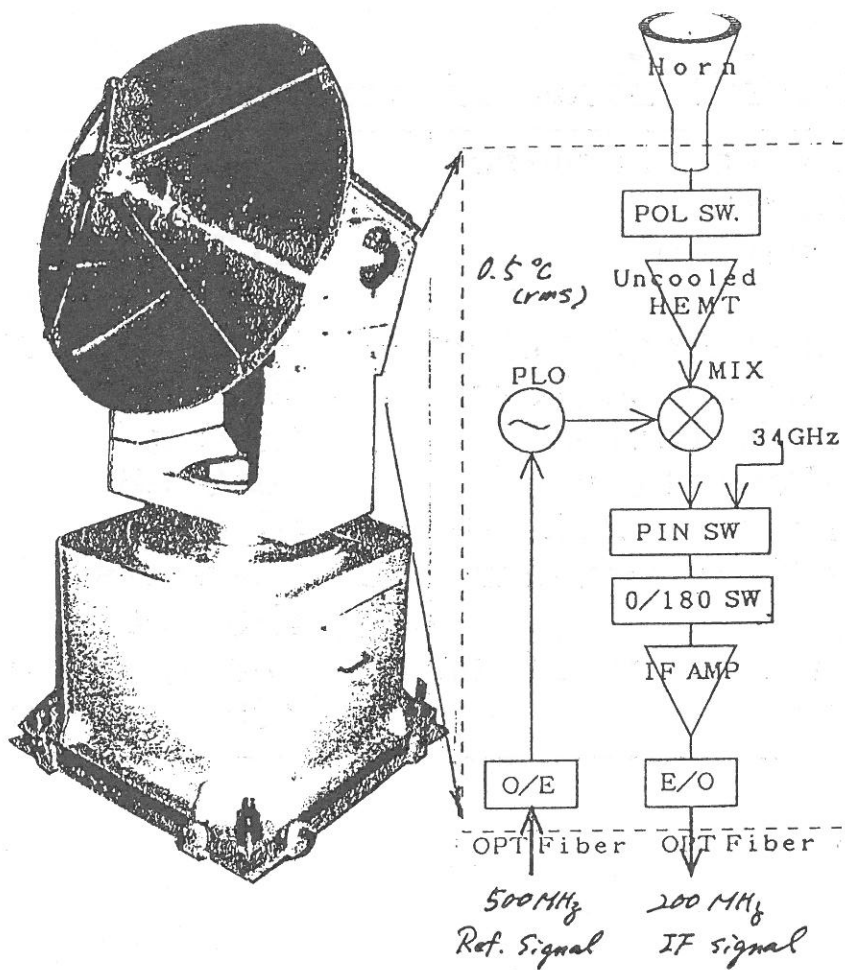
Temp. Coefficient of Fiber : 0.2 ppm
 Temp. Variation of 1.5m depth : 0.1°C(rms)
 Max Cable Length : 300 m
 Phase Variation : 0.17 deg(rms) at 17GHz

Specification of the Receiver

Observing Frequency	17 GHz
Bandwidth	40 MHz
Polaization	RHCP & LHCP (Time Shearing)
Temporal Resolution	50 ms & 1 s
Receier Noise Temp.	≤ 300 K
Phase Variation	≤ 3 deg
Gain Variation	≤ 0.2 dB
Accuracy of Pol. Degree	≤ 1 %
Cross-talk between Rec. Channels	≤ -90 dB
Dynamic Range of Image	100:1 (Snap Shot) 1000:1 (Synthesis)

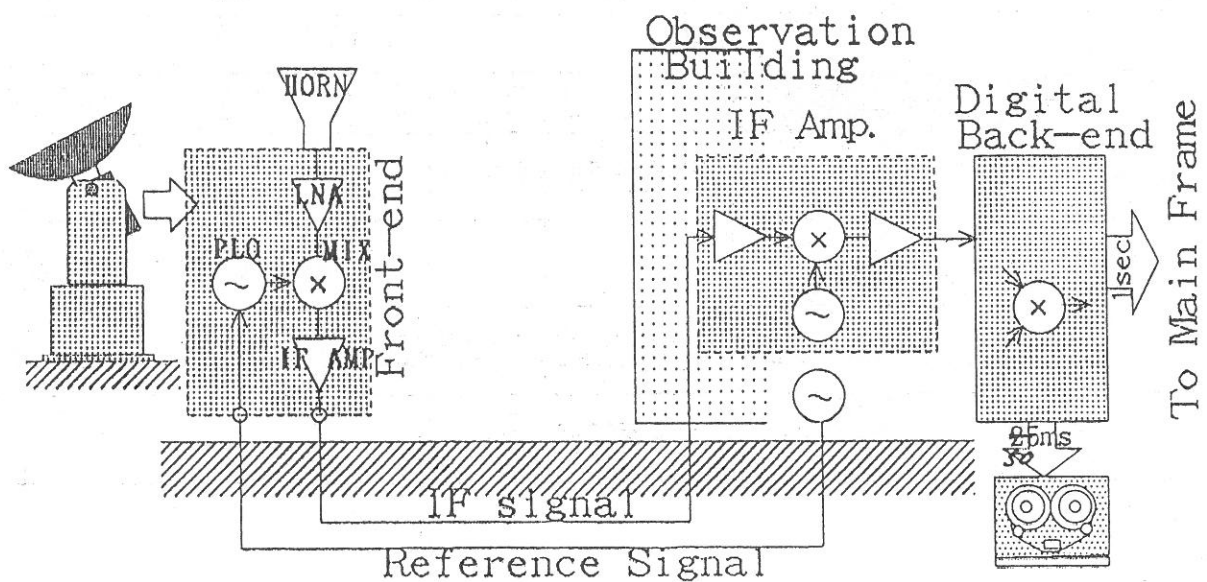
A Schedule of Receiver Manufacturing

	1990	1991											
	12	1	2	3	4	5	6	7	8	9	10	11	12
Front-end													
IF Amp.													
Digital Back-end													
Optical Fibers													



Phase drift : 3 deg.
Gain drift : 0.2 dB

Walsh Switching



B.W : 40 MHz
Pol. : RHCP / LHCP
Corr. : 1 bit mode, DSB type