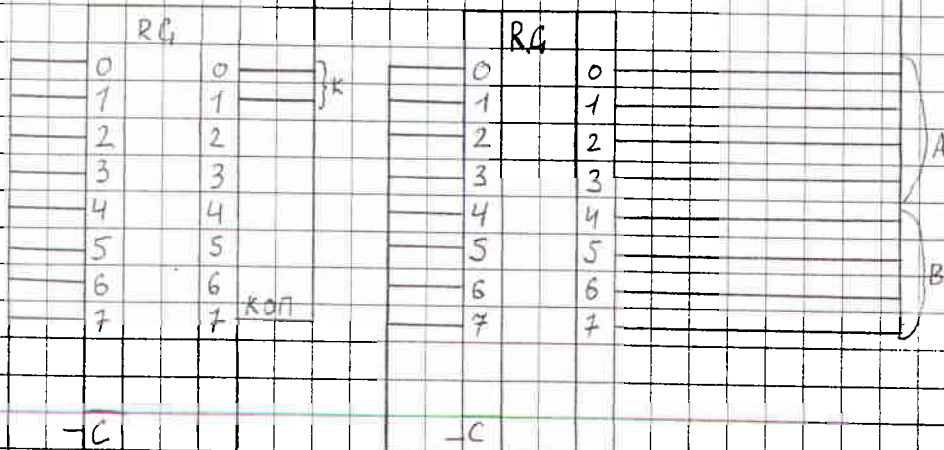
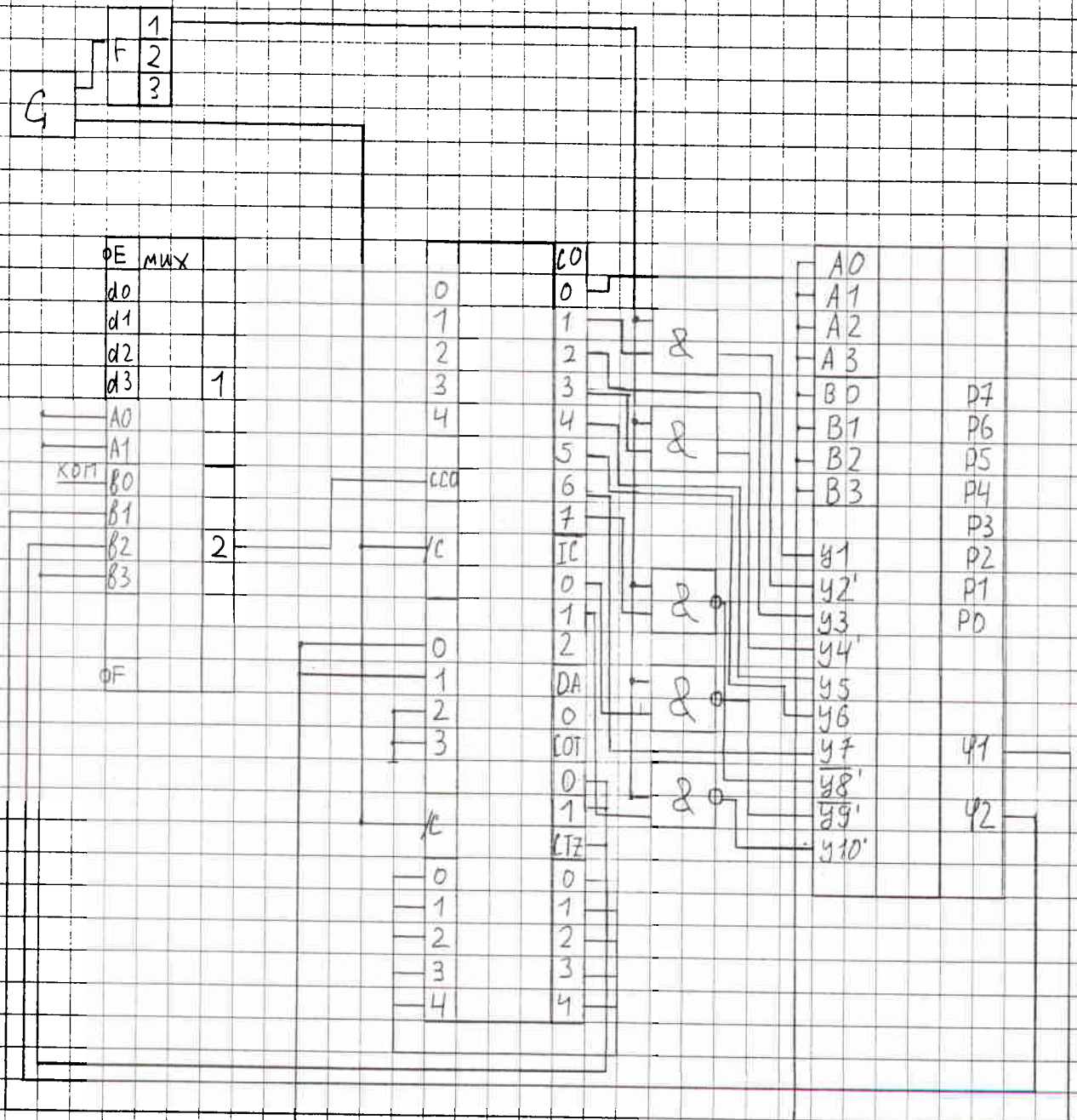
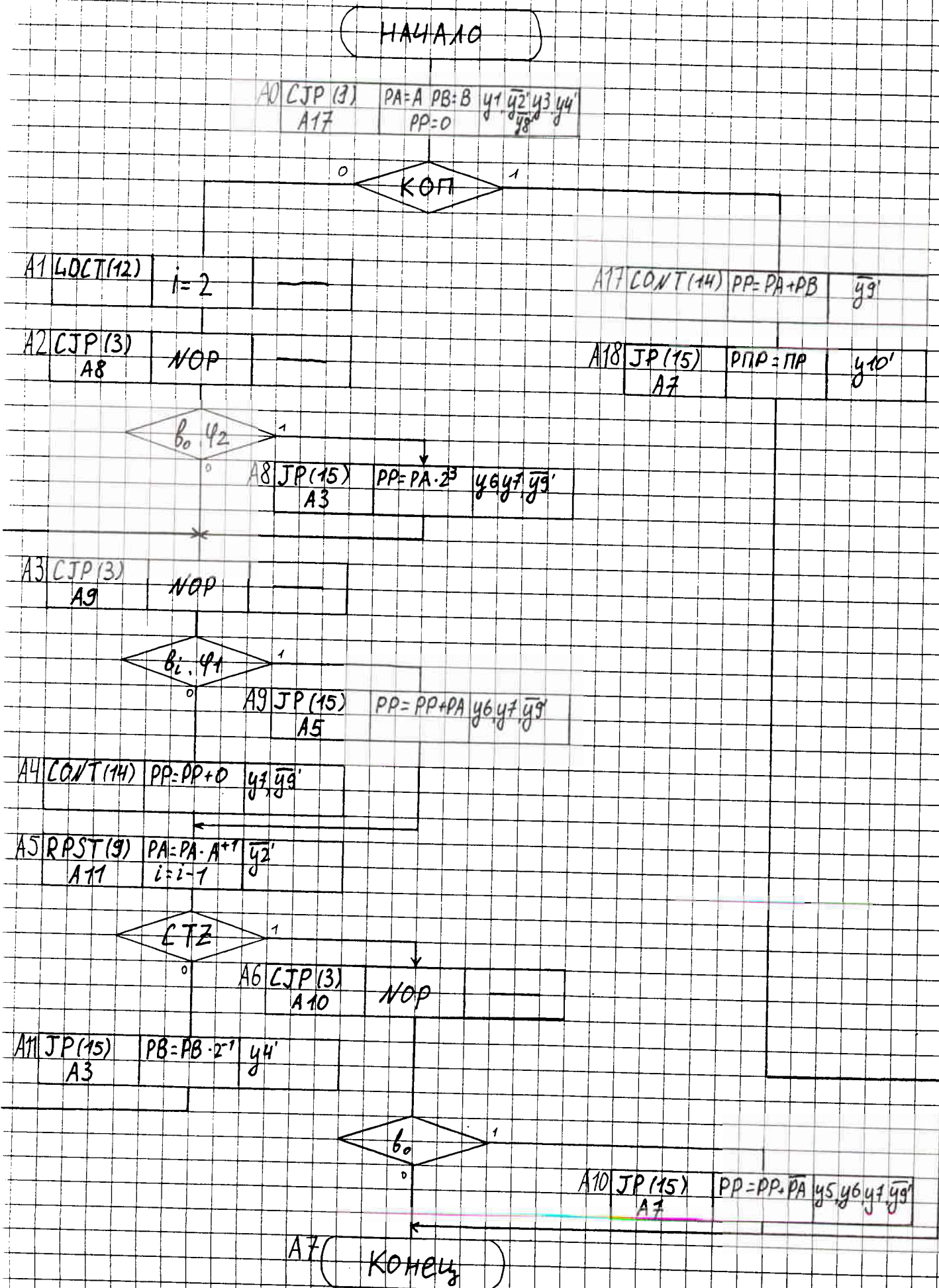


## 2. Разработка АЛУ

### 2.1. Схема эксперимента для АЛУ

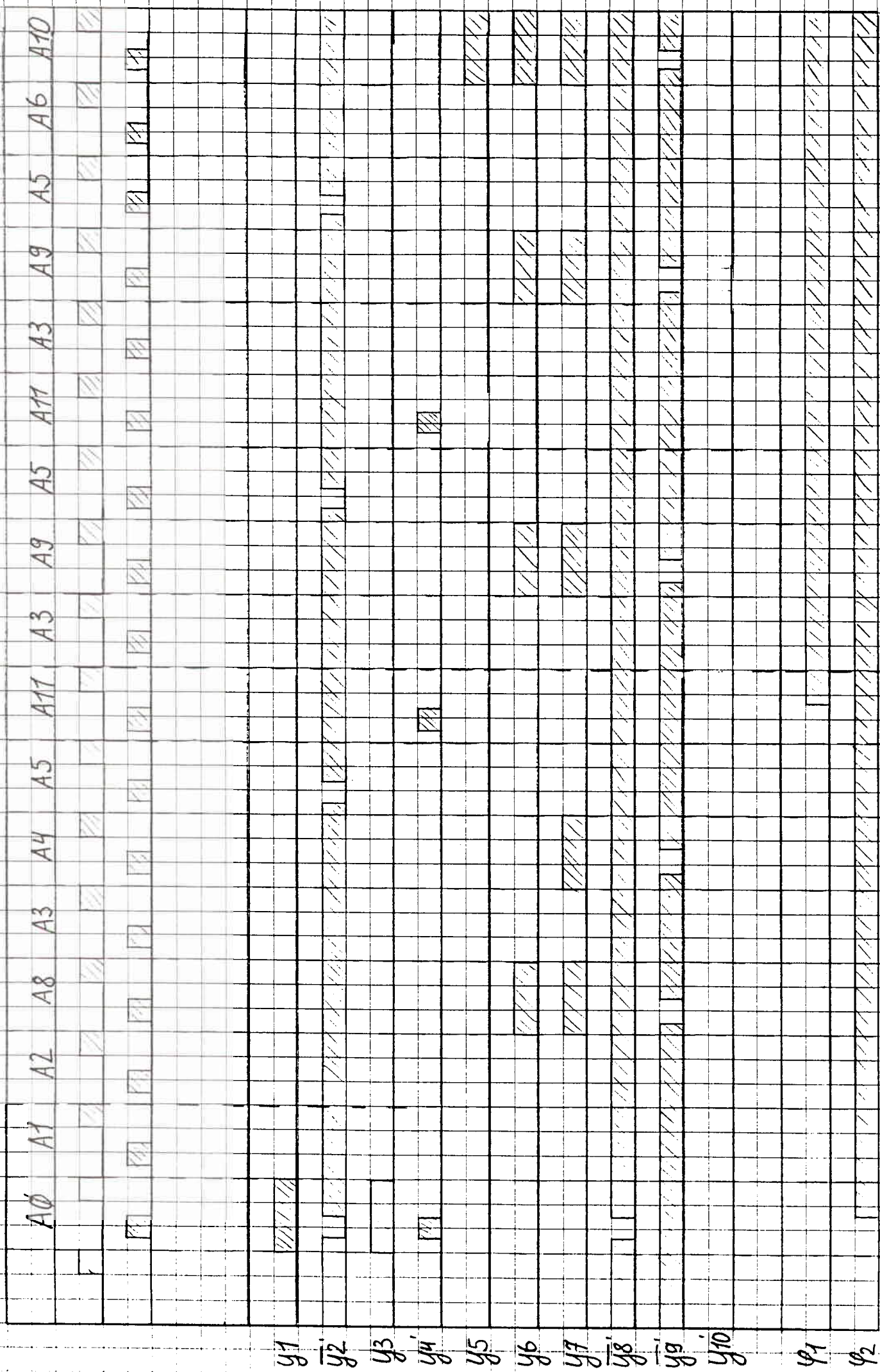


## 2.2 Алгоритмы микропрограмм для МКПХУ



B-1110

### 2.3. Временные диаграммы управляющих сигналов



A hand-drawn diagram on graph paper showing a cross-section of a dam. The dam is labeled 'A0' on the left, 'A17' in the middle, and 'A18' on the right. The diagram includes a vertical line representing the dam's core, with various hatched areas indicating different materials or sections. The top of the dam is labeled 'A0', 'A17', and 'A18' from left to right. The bottom of the dam is labeled 'A0', 'A17', and 'A18' from left to right. The diagram is drawn on a grid of 10x10 units.

$$y_1, y_2, y_3, y_4, y_5, y_6, y_7, y_8, y_9, y_{10}$$

## 2.4. Таблица зарядовки ПЗУ

AMK	BRA	COMCU	IC		C0		COT	КОМЕНТАРИЙ
4	3210432103210		10 y40' y8'		23 y3 y4' y5 y6 y7 y8'	10 y2 y1	10	
A0	A17	CJP(3)						
0000010001	—	LDST(12)	00		11	11	00	
A1	—							
0000100000	—	LDST(12)	00				00	
A2	A8	CJP(3)						
0001001000	A9	CJP(3)	00				10	φ2
A3	—							
0001101001	—	CONT(14)	00				01	φ1
A4	—							
0010000000	A11	RPST(9)	01				00	
A5	A10	CJP(3)	00				11	CTZ
0010100101	A7	JP(15)	00				10	φ2
A6	—							
0011100011	A3	JP(15)	00				00	
A7	A5	JP(15)	01				00	
0011100011	A7	JP(15)	01				00	
A8	—							
0100000011	A5	JP(15)	01				00	
A9	—							
0100100101	A7	JP(15)	01				00	
A10	A3	JP(15)	01				00	
0101000011	—	CONT(14)	00				00	
A11	—							
0101100011	—	LDST(12)	00				00	
A17	—							
1000100000	A7	JP(15)	01				00	
A18	—							
1001000111	—	LDST(12)	01				00	

# 2.5. Таблица тестирования АЛУ

Атек	Аопер	РА	РВ	РР	РПР	П1 П2	операция
4 3 2 1 0	4 3 2 1 0						
A0	A1	00000	00001	0000000			PA=A PB=B PP=0
A1	A2	00001	00010	0000000			i=2
A2	A3	00010	00011	0000000		0 1	nop
A3	A4	00011	00100	0000010			PP= PA·2 <sup>+3</sup>
A4	A5	00100	00101	0000000			nop
A5	A6	00101	00110	0000000			PA= PA·A <sup>+1</sup>
A6	A7	00110	00111	0000100			PB= PB·2 <sup>-1</sup>
A7	A8	00111	00000	0000000		1 1	nop
A8	A9	00000	00001	0000110			PP= PP+PA
A9	A10	00001	00010	0000000			PA= PA·A <sup>+1</sup>
A10	A11	00010	00011	0000000			PB= PB·2 <sup>-1</sup>
A11	A12	00011	00100	0000110			PP= PP+PA
A12	A13	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A13	A14	00101	00110	0000000			nop
A14	A15	00110	00111	0000101			PP= PP+PA
A15	A16	00111	00000	0000000			PA= PA·2 <sup>+1</sup>
A16	A17	00000	00001	0000000			nop
A17	A18	00001	00010	0000000			PP= PP+PA
A18	A19	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A19	A20	00011	00100	0000101			PP= PP+PA
A20	A21	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A21	A22	00101	00110	0000000			nop
A22	A23	00110	00111	0000101			PP= PP+PA
A23	A24	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A24	A25	00001	00010	0000000			nop
A25	A26	00010	00011	0000000			PP= PP+PA
A26	A27	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A27	A28	00100	00101	0000000			nop
A28	A29	00101	00110	0000000			PP= PP+PA
A29	A30	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A30	A31	00000	00001	0000000			nop
A31	A32	00001	00010	0000000			PP= PP+PA
A32	A33	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A33	A34	00011	00100	0000101			PP= PP+PA
A34	A35	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A35	A36	00101	00110	0000000			nop
A36	A37	00110	00111	0000101			PP= PP+PA
A37	A38	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A38	A39	00001	00010	0000000			nop
A39	A40	00010	00011	0000000			PP= PP+PA
A40	A41	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A41	A42	00100	00101	0000000			nop
A42	A43	00101	00110	0000000			PP= PP+PA
A43	A44	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A44	A45	00000	00001	0000000			nop
A45	A46	00001	00010	0000000			PP= PP+PA
A46	A47	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A47	A48	00011	00100	0000101			PP= PP+PA
A48	A49	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A49	A50	00101	00110	0000000			nop
A50	A51	00110	00111	0000101			PP= PP+PA
A51	A52	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A52	A53	00001	00010	0000000			nop
A53	A54	00010	00011	0000000			PP= PP+PA
A54	A55	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A55	A56	00100	00101	0000000			nop
A56	A57	00101	00110	0000000			PP= PP+PA
A57	A58	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A58	A59	00000	00001	0000000			nop
A59	A60	00001	00010	0000000			PP= PP+PA
A60	A61	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A61	A62	00011	00100	0000101			PP= PP+PA
A62	A63	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A63	A64	00101	00110	0000000			nop
A64	A65	00110	00111	0000101			PP= PP+PA
A65	A66	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A66	A67	00001	00010	0000000			nop
A67	A68	00010	00011	0000000			PP= PP+PA
A68	A69	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A69	A70	00100	00101	0000000			nop
A70	A71	00101	00110	0000000			PP= PP+PA
A71	A72	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A72	A73	00000	00001	0000000			nop
A73	A74	00001	00010	0000000			PP= PP+PA
A74	A75	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A75	A76	00011	00100	0000101			PP= PP+PA
A76	A77	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A77	A78	00101	00110	0000000			nop
A78	A79	00110	00111	0000101			PP= PP+PA
A79	A80	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A80	A81	00001	00010	0000000			nop
A81	A82	00010	00011	0000000			PP= PP+PA
A82	A83	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A83	A84	00100	00101	0000000			nop
A84	A85	00101	00110	0000000			PP= PP+PA
A85	A86	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A86	A87	00000	00001	0000000			nop
A87	A88	00001	00010	0000000			PP= PP+PA
A88	A89	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A89	A90	00011	00100	0000101			PP= PP+PA
A90	A91	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A91	A92	00101	00110	0000000			nop
A92	A93	00110	00111	0000101			PP= PP+PA
A93	A94	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A94	A95	00001	00010	0000000			nop
A95	A96	00010	00011	0000000			PP= PP+PA
A96	A97	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A97	A98	00100	00101	0000000			nop
A98	A99	00101	00110	0000000			PP= PP+PA
A99	A100	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A100	A101	00000	00001	0000000			nop
A101	A102	00001	00010	0000000			PP= PP+PA
A102	A103	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A103	A104	00011	00100	0000101			PP= PP+PA
A104	A105	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A105	A106	00101	00110	0000000			nop
A106	A107	00110	00111	0000101			PP= PP+PA
A107	A108	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A108	A109	00001	00010	0000000			nop
A109	A110	00010	00011	0000000			PP= PP+PA
A110	A111	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A111	A112	00100	00101	0000000			nop
A112	A113	00101	00110	0000000			PP= PP+PA
A113	A114	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A114	A115	00000	00001	0000000			nop
A115	A116	00001	00010	0000000			PP= PP+PA
A116	A117	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A117	A118	00011	00100	0000101			PP= PP+PA
A118	A119	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A119	A120	00101	00110	0000000			nop
A120	A121	00110	00111	0000101			PP= PP+PA
A121	A122	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A122	A123	00001	00010	0000000			nop
A123	A124	00010	00011	0000000			PP= PP+PA
A124	A125	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A125	A126	00100	00101	0000000			nop
A126	A127	00101	00110	0000000			PP= PP+PA
A127	A128	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A128	A129	00000	00001	0000000			nop
A129	A130	00001	00010	0000000			PP= PP+PA
A130	A131	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A131	A132	00011	00100	0000101			PP= PP+PA
A132	A133	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A133	A134	00101	00110	0000000			nop
A134	A135	00110	00111	0000101			PP= PP+PA
A135	A136	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A136	A137	00001	00010	0000000			nop
A137	A138	00010	00011	0000000			PP= PP+PA
A138	A139	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A139	A140	00100	00101	0000000			nop
A140	A141	00101	00110	0000000			PP= PP+PA
A141	A142	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A142	A143	00000	00001	0000000			nop
A143	A144	00001	00010	0000000			PP= PP+PA
A144	A145	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A145	A146	00011	00100	0000101			PP= PP+PA
A146	A147	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A147	A148	00101	00110	0000000			nop
A148	A149	00110	00111	0000101			PP= PP+PA
A149	A150	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A150	A151	00001	00010	0000000			nop
A151	A152	00010	00011	0000000			PP= PP+PA
A152	A153	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A153	A154	00100	00101	0000000			nop
A154	A155	00101	00110	0000000			PP= PP+PA
A155	A156	00110	00111	0000101			PA= PA·2 <sup>+1</sup>
A156	A157	00000	00001	0000000			nop
A157	A158	00001	00010	0000000			PP= PP+PA
A158	A159	00010	00011	0000000			PA= PA·2 <sup>+1</sup>
A159	A160	00011	00100	0000101			PP= PP+PA
A160	A161	00100	00101	0000000			PA= PA·2 <sup>+1</sup>
A161	A162	00101	00110	0000000			nop
A162	A163	00110	00111	0000101			PP= PP+PA
A163	A164	00000	00001	0000000			PA= PA·2 <sup>+1</sup>
A164	A165	00001	00010	0000000			nop
A165	A166	00010	00011	0000000			PP= PP+PA
A166	A167	00011	00100	0000101			PA= PA·2 <sup>+1</sup>
A167	A168	00100	00101	0000000			nop
A168	A169	00101	00110	0000000			PP= PP+PA
A169	A170	00110	00111	000			