Amplifier (Tennelec TC241)
CRDC 1 Anode
Unl. Out
C: Gain 10
X: Gain 5
T: Gain 5
Fast Out
E1: CRDC 1 Anode
RJC2515
Amplifier (Tennelec TC241)
CRDC 2 Anode
E2: CRDC 2 Anode
RJC2512
Canberra LTO
40 ns
RJC1264
Disc. Sum Hodoscope 16: E1
Disc. Sum Hodoscope 8: E2
Hodoscope 16: E1
Hodoscope 8: E2
Hodoscope 1: E1
Hodoscope 9: E2
Fan In / Out (ESN LF 4400)
RJC4511
CRDC1
CRDC2
to stop TAC CRDC1
to ALM CRDC1
to SUM1 and MTDC
to stop TAC CRDC2
to ALM CRDC2
to SUM2 and MTDC
EXT2 (UNPLUGGED)
to ULM (A)
E1 up 5800 trigger
E1 down
A1900
OBJ SCI
Fan In / Out (ESN LF 4000)
RJC4503
to MTDC #15
to MSc + MTDC #15 + MTDC #1
Variable Amplifier (LeCroy 612Dbl)
#1 up
#1 down
S1: ??
91: From OBJ SCI
1 Right
2 Right
1 Left
2 Left
RJC4298
Splitter A/L (NICL)
RJC3512
to F09A
1-15
MCP (+90 MCP) MCP2-16 (-220 ns) (Mesytec) (-220 ns)
RJC4293
E1 = 5800 trigger
A1900
OBJ SCI
RF
CRDC1
CRDC2
Hodoscope 8-15
ECL-NIM-ECL (NICL)
RJC4252
5800 Trigger
To Scaler and MTDC
1: E1 up
2: E1 down
4: OBJ SCI
5: RF
6: CRDC 1 anode
7: CRDC 2 anode
11: Hodoscope
12: 5800 trigger
Pwr 5
RJC4263
B5: TDC Start
B13: Fast Clear
B4: CCFC gate
to ch CFD (LeCroy 4413)
Clear and Gate to F09A
RJC1520
to Phillips TDC
1,2
3,4
MTDC-32 (Mesytec)
E1 up
E1 down
A1900
OBJ SCI
RF
CRDC1 anode
CRDC2 anode
Hodoscope
Pwr 5
RJC4263
B2 Live Trigger
B3 ADC Gate
B4 CCFC Gate
B5 TDC Start
B6 Trigger Register Gate
B8 Live Trigger
B9 Beam On
B10 Inspt 1
B11 Inspt 2
B12 Inspt 3
B13 Fast Clear
B16: Time stamp clock
D1: 5800 source
D2: Secondary source
D3: 5800 trigger
D4: Cons. Trigger
D5: Ext. trigg. 1
D6: Ext. trigg. 2
D7: Second trigg.
D8: Ext. trigg. 3
D9: Second trigg.
D10: Raw trigg.
D11: Raw pulser
D12: Raw pulser
D13: Live pulser
D14: Live pulser
D15: 10 Hz
D16: 1 Hz
C1: VM-USB-31 (Busy 1)
C2: CC-USB-31.02 (Time stamp latch)
C6: CC-USB-31.02 (Time stamp latch)
C9: Time stamp clock
C14: Time stamp latch
VME
VULM
(LeCroy 2367)
I/O A
I/O B
I/O C
RJC1527
I/O D
Scaler
(LeCroy 4434)
RJC5516
D1: 5800 source
D2: Secondary source
D3: 5800 trigger
D4: Cons. Trigger
D5: Ext. trigg. 1
D6: Ext. trigg. 2
D7: Second trigg.
D8: Ext. trigg. 3
D9: Second trigg.
D10: Raw trigg.
D11: Raw pulser
D12: Raw pulser
D13: Live pulser
D14: Live pulser
D15: 10 Hz
D16: 1 Hz
17: E1 up
18: E1 down
19: A1900
20: OBJ SCI
21: RF
22: CRDC 1 anode
23: CRDC 2 anode
28: Hodoscope
29: Hodoscope
32: 5800 trigg.
Net Controller (CAEN V288)
Serial line to CAEN shapers: hodoscope + ion chamber
RJC1521
ULM (7702)
RJC4254
CK Time stamp clock
CSTA: Time stamp latch
5800 Trigger 200 ns
62: From OBJ SCI CFD #14
TAC (ORTEC 566)
RJC4250
5800 Trigger
60: From Galotte CFD #14
RJC4263
B5: TDC Start
CRDC 2 Anode
RJC4260
5800 Trigger
A1900
RJC4264
5800 Trigger
CRDC 1 Anode
RJC4262
ULM/TV
PPACs
RJC4116
ADC (Phillips 7164)
RJC4320
B3: ADC gate
94-04 Target
1: CRDC1 anode
2: CRDC2 anode
3: TAC E1 (CRDC1)
4: TAC E2 (CRDC2)
5: TAC DF SCI (E1)
6: TAC ORL SCI (E1)
7: TAC E1 (Galotte E1)
TAC/E1 Hodoscope
Disc. out Hodoscope 8-15
Disc. out Hodoscope 16-31
Conc. Register (LeCroy 4448)
RJC1515
B6 Live Trigger
Gate
B15: TDC Start
CRDC 1 Anode
RJC4262
B15: TDC Start
CRDC 2 Anode
RJC4260
B15: TDC Start
TDC (Phillips 7186H)
Common
RJC1523
0-31 up det.
0-31 down det.
9-31 up det.
10-31 RF
11: Cyclotron gamma OR (Fast P-2)
12: Cyclotron RF
14: CRO SCI det.
15: RF SCI det.
ELAN (7701)
RJC1518
B13 Fast Clear
B4: CCFC gate
1: E1 up (det.
2: E1 down det.
9-31 up det.
10-31 RF
11: Cyclotron gamma OR (Fast P-2)
13: Cyclotron RF
14: CRO SCI det.
15: RF SCI det.
RJC1517
Chd
ELAN/TV
RJC5116
1: Live Trigger
2: CRDC 1 Anode
Last update:
Jorge Pereira, 7/29/2016
CRDC
Gretina
Cyclotron RF
5800 Trigger
Fast Clear
Pulser
OBJ SCI
Det # 1 target
Det # 3 target
Det # 4 target
Gretina gam OR (Fast Patch 2)
E1 up
E1 down
Galotte
Hodoscope
RF SCI
RF
ECL signals (Flat cable)
Shaper ampl. (CAEN N568B)
Ion Chamber
RJC1521
CAENET controller (CAEN V288)
serial line
RJC1520
Splitter A/L (NICL)
Discriminator (Phillips 7106)
Fast output
Sh. out to ADC
CAENET in
CAENET out
to coinc. reg. A
to coinc. reg. B
Sum
RJC1523
RJC1513
RJC1510
RJC4264
RJC4262
Gate Generator (NICL)
RJC4254
Hodos. 0-31 OR E1 up (5800 trig)
to Off with CH
Gate coinc. reg.
CC-USB 02
Fan In / Out (ESN LF 4000)
RJC4258
to ALM Del. (Phillips TDC)
E1/31 to 5800 FPD Rate Meter
to start TAC
to ALM (A)
to ALM (A)
to ALM Del. (Phillips TDC)
to ALM (A)
E1 up 5800 trigger
E1 down
Gretina gamma OR (Fast Patch 2)
Hodos. 0-31
EXT2
Fan In / Out (ESN LF 4000)
RJC4258
to Fast patch #1
to MTDC #15
to MTDC #1
to 4 KF patch. target area
E1 up
E1 down
Hodos. 0-15
Hodos. 16-31
Fan In / Out (NICL)
RJC4256
to scaler + MTDC
to TAC
ULM I/O (B)
B2: Live Trigger
B3: ADC Gate
B4: CCFC Gate
B5: TDC Start
B6: Coinc. Reg. Gate
B8: Live Trigger
B9: Inspt 1
B10: Inspt 2
B11: Inspt 3
B12: Inspt 4
B13: Fast Clear
B15: Go
ECL-NIM-ECL (ECAG) (ESN IC1488)
RJC1517
gate to F09A
D1-D5: Trigg. Inpts 1
D6-D8: Trigg. Inpt. 2
D1-D7: Trigg. Inpt. 3
D8-D15: Trigg. Inpt. 4
to clear ECL
pt #194 (target patch.)
RJC1511
to ULM PPACs
to start TAC ORDC1
to start TAC ORDC2
B5: TDC Start
B6: Coinc. Reg. Gate
B8: Live Trigger
B3: ADC Gate
Fan In / Out (ESN LF 4000)
RJC2510
to Phillips TDC
to ALM ORDC1
to ALM ORDC2
to veto RF
to Fast patch #: MasterLive (target area)
to MTDC trig2
to ADC Gate
B3: ADC Gate
B2: Live Trigger
62: From OBJ SCI CFD #14
Fan In / Out (LeCroy 4413)
RJC2511
to CC-USB
to ULM USB
to start TAC OBJ
to MTDC and scaler duplication
Where am I?
B8: Gen. more trigg. five signals
B8 Live Trigger
CRDC 1 Anode
B6 Coinc. Reg. Gate
B3 ADC Gate
B2 Live Trigger
B3 ADC Gate
B5 TDC Start
CC-USB O-14
ECL-NIM-ECL (NICL)
RJC2510
1-4
5-8
1-2
3-4
1-2 to ALM ORDC1
3-4 to ALM ORDC2
5-8 Gates to ADC Hodos.
9 to ULM C1 VM-USB 01
10 to ULM C2 CC-USB 01.02
11 to ULM C6 CC-USB 01.02
Logic Unit (Phillips 752)
Start TAC (E1 OBJ)
and
Start TAC (E1 RF)
RJC2514
5800 Trigger
Fast patch #1
12.5 MHz Gretina clock
Gretina synchr.
Hodos. 0-31
Gate Generator (NICL)
RJC4268
to TAC
to Scaler and MTDC
to Antisonic: Hodos.
to Start TAC Hodos.
B2 Live Trigger
VM-USB (Wiener)
RJC1511
to ULM (C)
to ULM (C)
RJC1524
B3 ADC gate
MTDC-32 (Mesytec)
E1 up
E1 down
A1900
OBJ SCI
RF
CRDC1 anode
CRDC2 anode
Hodoscope
Pwr 5
RJC4263
A1: 5800 trigger source (E1 up)
A2: Secondary trigger source
A3: 5800 trigger source
A4: External source 2
A5: Gretina synch (Fast Patch 3)
A6: Gretina clock (Fast Patch 1)
B2 Live Trigger
B3: ADC Gate
B4: CCFC Gate
B5: TDC Start
B6: Trigger Register Gate
B8: Live Trigger
B9: Beam On
B10: Inspt 1
B11: Inspt 2
B12: Inspt 3
B13: Fast Clear
B16: Time stamp clock
C1: VM-USB-31 (Busy 1)
C2: CC-USB-31.02 (Time stamp latch)
C6: CC-USB-31.02 (Time stamp latch)
C9: Time stamp clock
C14: Time stamp latch
VME
VULM
(LeCroy 2367)
I/O A
I/O B
I/O C
RJC1527
I/O D
D1: 5800 source
D2: Secondary source
D3: 5800 trigger
D4: Cons. Trigger
D5: Ext. trigg. 1
D6: Ext. trigg. 2
D7: Second trigg.
D8: Ext. trigg. 3
D9: Second trigg.
D10: Raw trigg.
D11: Raw pulser
D12: Raw pulser
D13: Live pulser
D14: Live pulser
D15: 10 Hz
D16: 1 Hz
17: E1 up
18: E1 down
19: A1900
20: OBJ SCI
21: RF
22: CRDC 1 anode
23: CRDC 2 anode
28: Hodoscope
29: Hodoscope
32: 5800 trigg.
Scaler
(LeCroy 4434)
RJC5516
5800 new (E1 up)
Gretina clk
Gretina synchr.
112 MHz Gretina clock
ECL-NIM-ECL (NICL)
RJC4257
1-4: from ULM Delay
1-8
to ULM (A)
64 5K Delay Inspect 1
64 5K Delay Inspect 2
5800 new (E1 up)
Gretina clk
Gretina synchr.
112 MHz Gretina clock
ECL-NIM-ECL (NICL)
RJC4257
1-4: from ULM Delay
1-8
to ULM (A)
64 5K Delay Inspect 1
64 5K Delay Inspect 2
5800 Trigger
A1900
RJC4264
5800 Trigger
RJC4263
B15: TDC Start
CRDC 2 Anode
RJC4260
B15: TDC Start
CRDC 1 Anode
RJC4262
5800 Trigger
RJC4266
B13 Fast Clear
B4: CCFC gate
1: E1 up (200 ns)
2: E1 up (200 ns)
ERRA
(LeCroy 4300B)
Clear
Gate
RJC1518
RLM12
RJC1510
1: Live Trigger
2: CRDC 1 Anode
RLM13
RJC1511
1: Live Trigger
2: CRDC 2 Anode
ADC (Phillips 7164H)
RJC1158
Live Trigger
Gate
Hodoscope 1-16 (from shaper)
ADC (Phillips 7164H)
RJC1157
Live Trigger
Gate
Hodoscope 17-32 (from shaper)
ADC (Phillips 7164H)
RJC1156
Live Trigger
Gate
Ion. Chamber (from shaper)
Logic Unit (Phillips 752)
NOT(B6: Coinc. Reg. gate)
5800 Trigger (100 ns)
5800 Trigger
Hodoscope 0-31
and
Gate
RJC1516
and
Gate
RJC1516
NOT(5800 Trigger)
AND(Hodoscope (0-31, NOT(5800 Trigger)))
to Phillips TDC
to MTDC + scalers
5800 Trigger
RJC4266
5,6
7
7,8
8