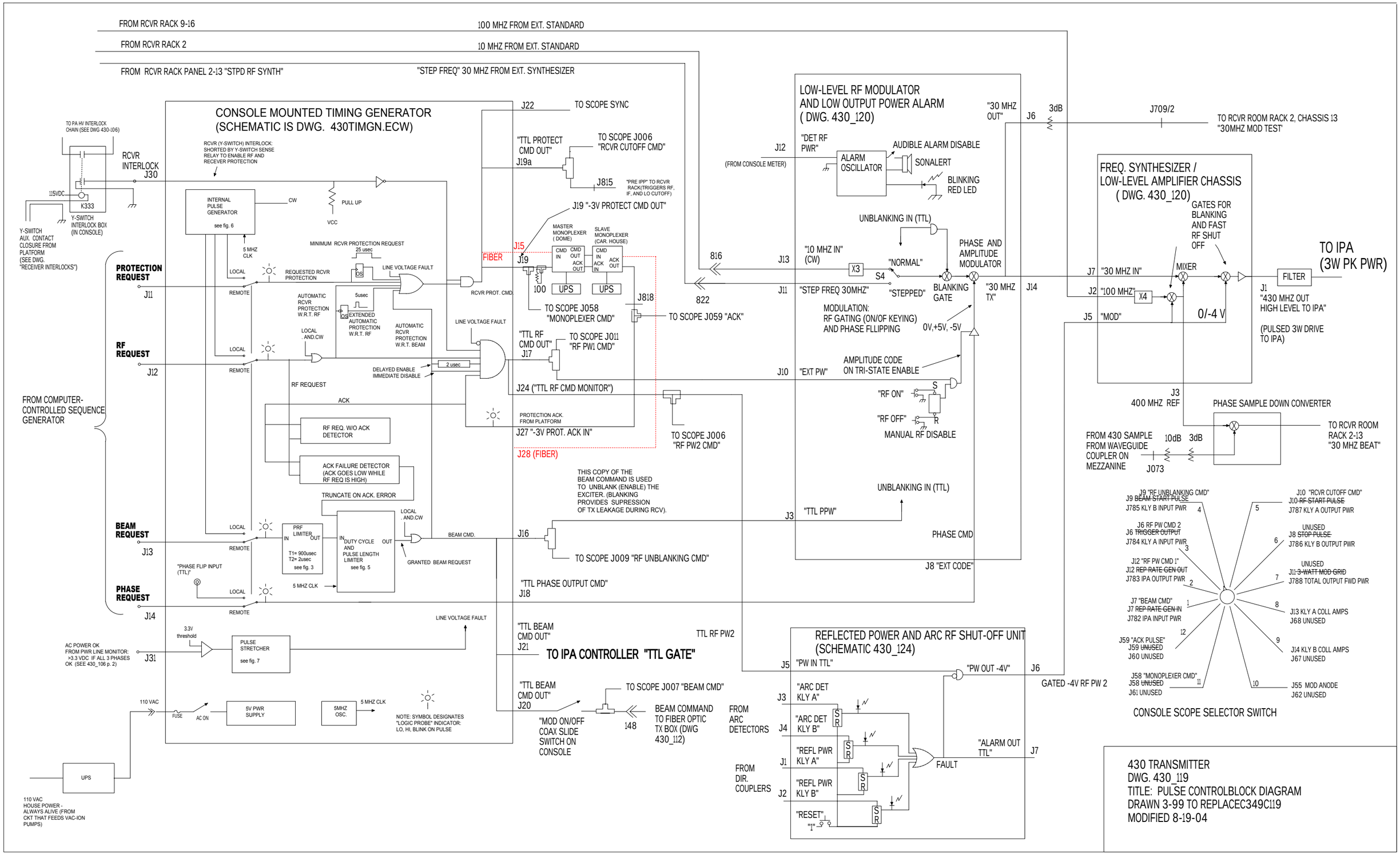
FROM RCVR RACK 9-16
100 MHZ FROM EXT. STANDARD
FROM RCVR RACK 2
10 MHZ FROM EXT. STANDARD
FROM RCVR RACK PANEL 2-13 "STPD RF SYNTH"
"STEP FREQ" 30 MHZ FROM EXT. SYNTHESIZER
CONSOLE MOUNTED TIMING GENERATOR
(SCHEMATIC IS DWG. 430TIMGN.ECW)
TO PA HV INTERLOCK CHAIN (SEE DWG 430-106)
RCVR INTERLOCK
J30
115VDC
K333
Y-SWITCH INTERLOCK BOX (IN CONSOLE)
Y-SWITCH AUX. CONTACT CLOSURE FROM PLATFORM (SEE DWG. "RECEIVER INTERLOCKS")
RCVR (Y-SWITCH) INTERLOCK: SHORTED BY Y-SWITCH SENSE RELAY TO ENABLE RF AND RECEVER PROTECTION
INTERNAL PULSE GENERATOR
see fig. 6
CW
PULL UP
VCC
5 MHZ CLK
MINIMUM RCVR PROTECTION REQUEST
25 usec
PROTECTION REQUEST
J11
LOCAL
REMOTE
REQUESTED RCVR PROTECTION
LINE VOLTAGE FAULT
AUTOMATIC RCVR PROTECTION W.R.T. RF
5usec
EXTENDED AUTOMATIC PROTECTION W.R.T. RF
AUTOMATIC RCVR PROTECTION W.R.T. BEAM
RF REQUEST
J12
LOCAL . AND.CW
DELAYED ENABLE IMMEDIATE DISABLE
2 usec
RF REQUEST
ACK
RF REQ. W/O ACK DETECTOR
ACK FAILURE DETECTOR (ACK GOES LOW WHILE RF REQ IS HIGH)
TRUNCATE ON ACK. ERROR
FROM COMPUTER-CONTROLLED SEQUENCE GENERATOR
BEAM REQUEST
J13
PRF LIMITER
T1= 900usec
T2= 2usec
see fig. 3
DUTY CYCLE AND PULSE LENGTH LIMITER
see fig. 5
BEAM CMD.
GRANTED BEAM REQUEST
"PHASE FLIP INPUT (TTL)"
5 MHZ CLK
PHASE REQUEST
J14
LINE VOLTAGE FAULT
AC POWER OK FROM PWR LINE MONITOR: >3.3 VDC IF ALL 3 PHASES OK (SEE 430_106 p. 2)
J31
3.3V threshold
PULSE STRETCHER
see fig. 7
110 VAC
FUSE
AC ON
5V PWR SUPPLY
5MHZ OSC.
5 MHZ CLK
NOTE: SYMBOL DESIGNATES "LOGIC PROBE" INDICATOR: LO, HI, BLINK ON PULSE
UPS
110 VAC HOUSE POWER - ALWAYS ALIVE (FROM CKT THAT FEEDS VAC-ION PUMPS)
J22
TO SCOPE SYNC
"TTL PROTECT CMD OUT"
J19a
TO SCOPE J006 "RCVR CUTOFF CMD"
J815
"PRE IPP" TO RCVR RACK(TRIGGERS RF, IF, AND LO CUTOFF)
J19 "-3V PROTECT CMD OUT"
MASTER MONOPLEXER ( DOME)
SLAVE MONOPLEXER (CAR. HOUSE)
CMD IN
CMD OUT
ACK OUT
ACK IN
J15
FIBER
J19
100
UPS
UPS
TO SCOPE J058 "MONOPLEXER CMD"
J818
TO SCOPE J059 "ACK"
RCVR PROT. CMD
LINE VOLTAGE FAULT
"TTL RF CMD OUT"
J17
TO SCOPE J011 "RF PW1 CMD"
J24 ("TTL RF CMD MONITOR")
PROTECTION ACK. FROM PLATFORM
J27 "-3V PROT. ACK IN"
J28 (FIBER)
TO SCOPE J006 "RF PW2 CMD"
THIS COPY OF THE BEAM COMMAND IS USED TO UNBLANK (ENABLE) THE EXCITER. (BLANKING PROVIDES SUPRESSION OF TX LEAKAGE DURING RCV).
J16
TO SCOPE J009 "RF UNBLANKING CMD"
"TTL PHASE OUTPUT CMD"
J18
"TTL BEAM CMD OUT"
J21
TO IPA CONTROLLER "TTL GATE"
"TTL BEAM CMD OUT"
J20
TO SCOPE J007 "BEAM CMD"
"MOD ON/OFF COAX SLIDE SWITCH ON CONSOLE
148
BEAM COMMAND TO FIBER OPTIC TX BOX (DWG 430_112)
TTL RF PW2
LOW-LEVEL RF MODULATOR AND LOW OUTPUT POWER ALARM
( DWG. 430_120)
"DET RF PWR"
J12
(FROM CONSOLE METER)
ALARM OSCILLATOR
AUDIBLE ALARM DISABLE
SONALERT
BLINKING RED LED
UNBLANKING IN (TTL)
"10 MHZ IN" (CW)
J13
X3
S4
"NORMAL"
"STEPPED"
PHASE AND AMPLITUDE MODULATOR
816
822
J11
"STEP FREQ 30MHZ"
BLANKING GATE
"30 MHZ TX"
J14
MODULATION: RF GATING (ON/OF KEYING) AND PHASE FLLIPPING
0V,+5V, -5V
AMPLITUDE CODE ON TRI-STATE ENABLE
J10
"EXT PW"
"RF ON"
"RF OFF"
S
R
MANUAL RF DISABLE
UNBLANKING IN (TTL)
J3
"TTL PPW"
PHASE CMD
J8 "EXT CODE"
"30 MHZ OUT"
J6
3dB
J709/2
TO RCVR ROOM RACK 2, CHASSIS 13 "30MHZ MOD TEST"
FREQ. SYNTHESIZER / LOW-LEVEL AMPLIFIER CHASSIS
( DWG. 430_120)
GATES FOR BLANKING AND FAST RF SHUT OFF
J7 "30 MHZ IN"
J2 "100 MHZ"
X4
J5 "MOD"
MIXER
0/-4 V
FILTER
TO IPA (3W PK PWR)
J1 "430 MHZ OUT HIGH LEVEL TO IPA"
(PULSED 3W DRIVE TO IPA)
J3 400 MHZ REF
PHASE SAMPLE DOWN CONVERTER
FROM 430 SAMPLE FROM WAVEGUIDE COUPLER ON MEZZANINE
10dB
3dB
J073
TO RCVR ROOM RACK 2-13 "30 MHZ BEAT"
J9 "RF UNBLANKING CMD"
J9 BEAM START PULSE
J785 KLY B INPUT PWR
J6 RF PW CMD 2
J6 TRIGGER OUTPUT
J784 KLY A INPUT PWR
J12 "RF PW CMD 1"
J12 REP RATE GEN OUT
J783 IPA OUTPUT PWR
J7 "BEAM CMD"
J7 REP RATE GEN IN
J782 IPA INPUT PWR
J59 "ACK PULSE"
J59 UNUSED
J60 UNUSED
J58 "MONOPLEXER CMD"
J58 UNUSED
J61 UNUSED
J10 "RCVR CUTOFF CMD"
J10 RF START PULSE
J787 KLY A OUTPUT PWR
UNUSED
J8 STOP PULSE
J786 KLY B OUTPUT PWR
UNUSED
J11 3-WATT MOD GRID
J788 TOTAL OUTPUT FWD PWR
J13 KLY A COLL AMPS
J68 UNUSED
J14 KLY B COLL AMPS
J67 UNUSED
J55 MOD ANODE
J62 UNUSED
CONSOLE SCOPE SELECTOR SWITCH
REFLECTED POWER AND ARC RF SHUT-OFF UNIT
(SCHEMATIC 430_124)
J5 "PW IN TTL"
"PW OUT -4V"
J6
GATED -4V RF PW 2
FROM ARC DETECTORS
J3 "ARC DET KLY A"
J4 "ARC DET KLY B"
J1 "REFL PWR KLY A"
J2 "REFL PWR KLY B"
FROM DIR. COUPLERS
"RESET"
"1"
S R
FAULT
"ALARM OUT TTL"
J7
430 TRANSMITTER
DWG. 430_119
TITLE: PULSE CONTROLBLOCK DIAGRAM
DRAWN 3-99 TO REPLACEC349C119
MODIFIED 8-19-04