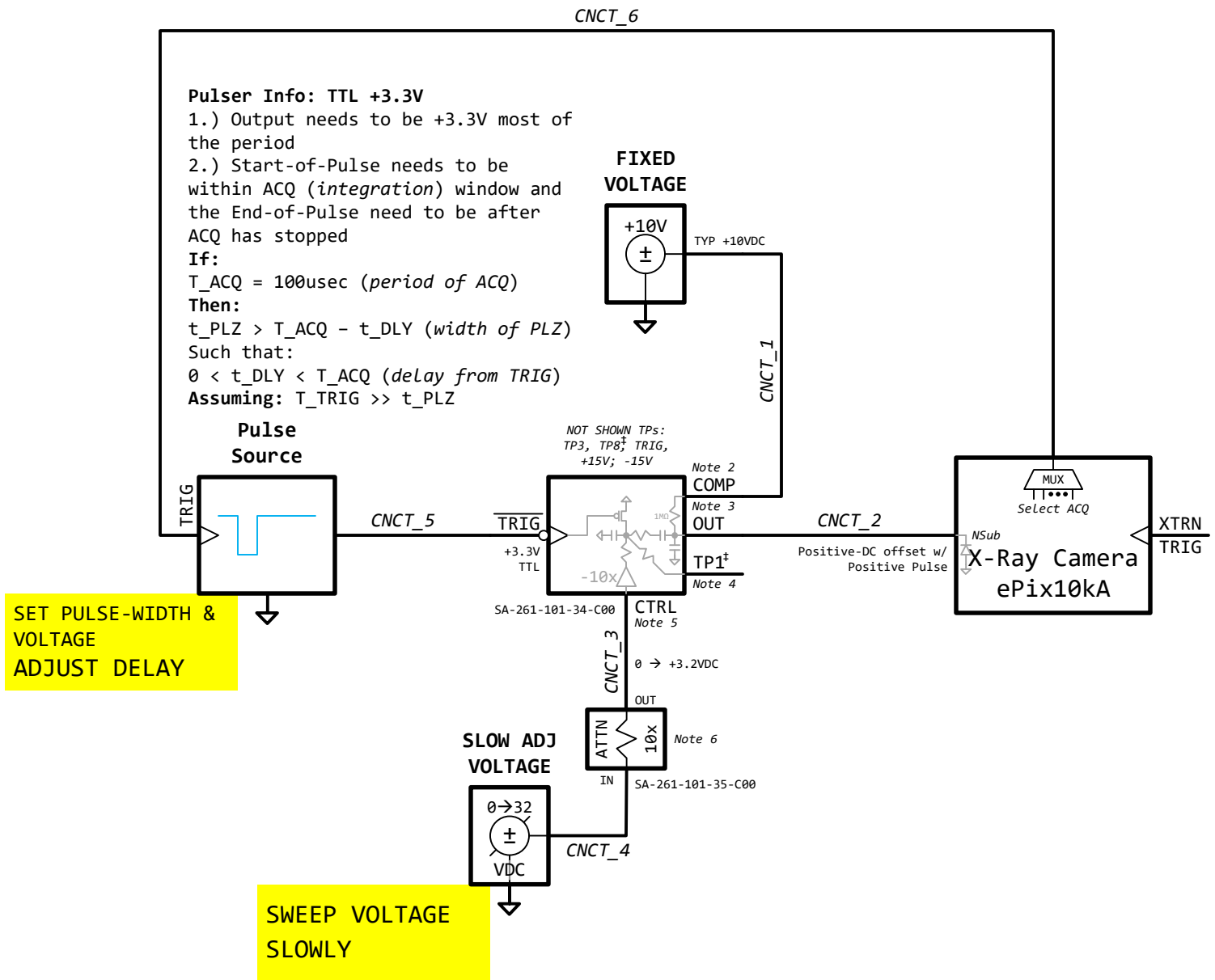# TYPICAL SETUP: SA-261-101-34-C00

CABLE INFO:
CNCT_1: ADPTR x2_Banana-M-to-BNC-F → CBL BNC-M-to-SMA-M
CNCT_2: CBL SMA-M-to-BNC-M → ADPTR BNC-F-to-x2_Banana-F
CNCT_3: CBL SMA-M-to-SMA-M
CNTC_4: ADPTR x2_Banana-M-to-BNC-F → CBL BNC-M-to-SMA-M
CNCT_5: CBL BNC-M-to-SMA-M
CNCT_6: CBL BNC-M-to-BNC-M

Pulser Info: TTL +3.3V
1.) Output needs to be +3.3V most of the period
2.) Start-of-Pulse needs to be within ACQ (*integration*) window and the End-of-Pulse need to be after ACQ has stopped
If:
T_ACQ = 100usec (*period of ACQ*)
Then:
t_PLZ > T_ACQ – t_DLY (*width of PLZ*)
Such that:
0 < t_DLY < T_ACQ (*delay from TRIG*)
Assuming: T_TRIG >> t_PLZ

Pulse Source

NOT SHOWN TPs: TP3, TP8‡ TRIG, +15V; -15V

FIXED VOLTAGE +10V ± TYP +10VDC

SET PULSE-WIDTH & VOLTAGE ADJUST DELAY

SLOW ADJ VOLTAGE 0→32 ± VDC

SWEEP VOLTAGE SLOWLY

COMP *Note 2*
Note 3 OUT
TP1‡ *Note 4*
CTRL *Note 5*
0 → +3.2VDC
SA-261-101-34-C00
+3.3V TTL
-10x

ATTN 10x *Note 6*
IN
SA-261-101-35-C00

Positive-DC offset w/ Positive Pulse

MUX *Select ACQ*
NSub
X-Ray Camera ePix10kA
XTRN TRIG

Notes:
1.) SYMBOL ‡ Current limited to 5mA due absolute-voltage-potential-relative to ground > 50VDC
2.) **LIMIT,** |V_COMP – (-10*V_CTRL)| ≤ 180VDC: C10 to C12 on SD-144-174-04 are limited to 200VDC
      a.) COMP is used to set the DC-bias on the substrate
      b.) The resistance between COMP and OUT is currently 1MΩ
          i.) This is adequate unless substrate locks up–can reduced if lockup becomes an issue
      c.) V_COMP ≥ 0VDC: The closer to 0 the larger the substrate capacitance (*less likely to lockup*)
3.) OUT is generate a positive 0 → +100V pulse relative to V_COMP
4.) *FOR ALL* TEST-POINTS (TP) Use ≥ 1MΩ probe
5.) **LIMIT,** 0 ≤ V_CTRL ≤ +10VDC: Input resistance on CTRL node is 1kΩ
6.) ATTN 10x SA-261-101-35-C00
      a.) Designed to work at max voltage ±32VDC input with 1kΩ load
      b.) Had directionality (*non-symmetric voltage divider*)
      c.) Used so can sweep pulse voltage in smaller steps
7.) ALL NODES ARE CLAMPED FOR PROTECTION to GND with zener-diodes: Except OUT is clamped to COMP with diode to only produce positive pulses relative to COMP (*to avoid possibly reverse biasing substrate*)