



Inter-Office Communication

RECEIVED  
JUN 6 1958

To: ~~Byron Broms~~

Date: June 4, 1958

From: Bill Kladke

TEKTRONIX, INC.  
PORTLAND, OREGON

SYRACUSE

Subject: Special 3-inch scope - GE Schenectady

Dear Byron:

I talked to Jack on another special instrument -- for Ed Schrom of General Electric, Schenectady.

Ed said that GE was concerned with power line voltages in homes that repeatedly have appliance trouble. GE feels that the trouble is not with the appliance itself, but rather with transients in the power line. Therefore Ed was wondering if we would be interested in building a special scope for installation in homes with appliance trouble for continuously monitoring power line voltage.

A few special requirements for this scope are:

1. to generate a sweep each time a transient appears on the power line. This would enable them to photograph these transients by means of an automatic camera mounted on the scope.
2. The vertical amplifier band pass would be somewhere close to 2 megacycles.
3. A logarithmic sweep with a duration of about 10 to 20 $\mu$ s is desired.

The power line voltages they hope to monitor would be 440 v. and lower.

Ed further mentioned that he thinks, with a 3-inch tube, they would be willing to pay up to \$1,200 per unit. Incidentally, the number of units involved would be somewhere around 100.

Ed also thought that other appliance companies might also desire something like this, once they realized what is possibly causing appliance failures.

From the looks of things, we could start out with the Type 316 and butcher it up to meet these requirements. Please give price and delivery information if we are interested and, also, let me know if you require any additional information on this unit.

Best regards,

*Bill*  
Bill *gdm*

WFK:JDM

cc: Jack Cassidy

Bill Kladke

June 26, 1958

Frank Thomas

Special 3-inch Scope-----G. E. Schneestady  
Your IOC of June 4, 1958

Dear Bill,

Byron slid your IOC over to me for answering. This is certainly an interesting situation! As far as making a brand new instrument I think you would agree that a total usage of even several hundred would probably not justify the amount of engineering required; particularly in view of the demands placed on Engineering right now for badly needed instruments.

Now that I've discouraged you---a copy of your letter has been passed to Chuck Nolan and I'm sure he will be wanting to get in touch with you for additional information.

Best,

Frank

FAT/pb

*Byron* (2)

Bill Klacke

June 30, 1958

Chuck Nolan

Special 3" Scope  
G.E. Schenestady, IOC June 4

Dear Bill:

Your IOC of June 4, and the special 3" scope for Ed Schrom of G.E., sounds like a rather interesting application of one of our instruments. The preliminary requirements do not sound too tough to me, unless we have to come up with an automatic camera, which I assume we do not. I think the signal and triggering could both be taken care of quite readily with a high-pass filter in the line to knock out the line signal, and look only at the relatively fast surge pulse.

You mention logarithmic sweep with a duration of 10 to 20  $\mu$ sec. We feel that we could probably do a sweep which would start out at say some speed which would be reduced by a factor of 10 as it approached the end of the sweep. This 10 to 20  $\mu$ sec which you speak of sounds a wee bit fast, but if that's what they want, that's what we could do.

Would this, then, be a scope with one fast sweep speed? Would all the controls be removed from the front panel? The first thing that occurred to me was maybe modifying a 310, or it could be a 316 as you suggested. Actually, the 316 would probably be easier to modify. Do they have any idea of the amplitude of the surge pulses involved? In other words, what would the input sensitivity have to be to the instrument?

In answer to your last request which had to do with price and delivery, it's a little difficult without knowing the full requirements to establish this information. However, if they're willing to pay up to \$1200 per unit we certainly should be able to produce an instrument priced within this.

Bill, we still have a stack of drawings on a special RM15 with 12" X 24" panel. This has nothing to do with the price of cheese, just thought you might be interested.

I believe that's all I can think of for this time. Will be awaiting your answers.

Best regards,

Chuck  
CN/dvm

cc: Byron Broms  
Frank Thomas  
Will Marsh

Scotty Pyle



Inter-Office Communication

RECEIVED

JUL 2 1958

To: Frank Thomas

TEKTRONIX, INC.  
PORTLAND, OREGON

Date: 6/30/58

From: Bill Kladke

SYRACUSE

Subject: Special scope for G.E., Schenectady

Dear Frank:

After I wrote to Portland concerning the special scope for G.E., Schenectady, I received the enclosed set of specifications for the scope. The picture seems to have changed somewhat, both in scope specifications and quantity. From your letter it doesn't sound very encouraging, but I'd like to have Portland comment on this anyway.

Please don't discourage Chuck Nolan, let's see if he won't be discouraged all by himself!

Enjoyed our golf game. Will be looking forward to another one next year!

Best regards,

*Bill*

Bill

BK/eh

**GENERAL ELECTRIC**  
COMPANY

GENERAL ENGINEERING LABORATORY

ONE RIVER ROAD, SCHENECTADY 5, NEW YORK

RECEIVED  
JUL 2 1958

TEKTRONIX, INC  
PORTLAND, OREGON

SUBJECT: TRANSIENT VOLTAGE MEASUREMENTS ON  
CONSUMER CIRCUITS

June 25, 1958

Mr. William F. Kladke, Jr.  
Tektronix, Inc.  
313 Nottingham Road  
Syracuse, New York

RECEIVED  
JUN 28 1958  
SYRACUSE OFFICE  
TEKTRONIX, INC.

Dear Mr. Kladke:

I believe Mr. E. C. Schrom has already discussed with you the possibility of you quoting us on some special Cathode Ray Oscilloscopes for indicating high speed voltage transients on consumer circuits. We appreciate your interest, and to facilitate your quoting, we have attached a functional specification sheet describing the essentials to be incorporated in such a special instrument.

May we please have your best quotation covering price and delivery on one prototype unit and on ten final units at your earliest convenience.

Very truly yours,

*P. N. Bosworth*

P. N. Bosworth, Manager  
Electrostatic & High Voltage Engineering  
Building 37, Room 411, Extension 713

FNB/mf  
Enclosure

cc: RA Sharp, #37-260  
EC Schrom, #37-411

*one of these  
specs held to  
Bell K - per  
Sally request of  
7-11 than E.S.  
day*

Bill Kladke

July 7, 1958

Chuck Nolan

Special Scope for  
G.E. Schenectady

Dear Bill:

If I am assimilating all of the notations that I have from a couple of sources properly, it would appear that all these people want is a specially designed, either 12 or 24 kv oscilloscope with a logarithmic sweep, and I assume a 5" screen, capable of handling in the vertical system 750 to 5000 volts, complete with a fully automatic camera capable of advancing film on any surge that appears on the line, and automatic circuitry which will advance the film every four hours if there have been no surges, in quantities of 10 - for \$1200 each?

Bill, we are looking into this camera aspect of things just a little bit while waiting to hear from you a little more; but I am quite certain that the camera itself may run into quite a piece of change.

Now - turn about - if you are not too discouraged, we would be happy to hear from you.

What's the matter - you afraid to write to me direct?

Regards,

Chuck

CN/dvm

cc: Byron Broms/Frank Thomas  
Will Marsh



## Inter-Office Communication

To: Chuck Nolan

From: Bill Kladke

Subject:

RECEIVED

JUL 21 1958

TEKTRONIX, INC.  
PORTLAND, OREGON

Date: 7/17/58

SYRACUSE

Dear Chuck:

I goofed!

Would you please send the specs for the special G.E. scope (design for consumer house use) back to Syracuse. Didn't leave a copy for myself. After I have obtained the information I need, I'll send them back to you.

Thanks for the encouraging note.

Yes, I am afraid to write to you directly!

Best regards,

*Bill*  
*eh*

Bill

WK/eh  
nr

Bill Klacke

July 17, 1958

Chuck Nolan

Special scope for G.E. Schenectady

Dear Bill:

Per Scotty's request to us today, we are returning Mr. Bosworth's specifications on "Transient Voltage Measurements on Consumer Circuits" (special scope for indicating same.)

Regards,

Dorothy for Chuck

dvm  
Enc.





Inter-Office Communication

RECEIVED

JUL 28 1958

To: Chuck Nolan

TEKTRONIX, INC.  
PORTLAND, OREGON

Date: 7/23/58

From: Bill Kladke

SYRACUSE

Subject: Special Scope for G.E., Schenectady

Dear Chuck:

Just chatted with Mr. Bosworth concerning the special scope for indicating high speed voltage transients on consumer circuits.

The problem of choosing an automatic camera will be turned over to G.E. so long as our circuitry is compatible with the camera, i.e. trigger for advancing film, etc. As far as sweep ranges, he mentioned one (1) sweep range; as specified in his letter, would suffice for the time being. Meaning that for the first batch of scopes; then if scope proves successful they will order more with different sweep speeds if required.

Your assumption on a 5" screen is correct, and also on the number of controls-- as few as possible.

It boils down then to the price and delivery of the scope itself. Easy, huh!

Please let me know if you would like Mr. Bosworth's letter back.

Remember the important thing is not to get discouraged.

Regards,

*Bill*

Bill

P.S. Hang on to that stack of drawings on special RML5 with 12" x 24" panel, just in case price of cheese changes.

cc: Byron Broms  
Frank Thomas  
Will Marsh

WK/eh