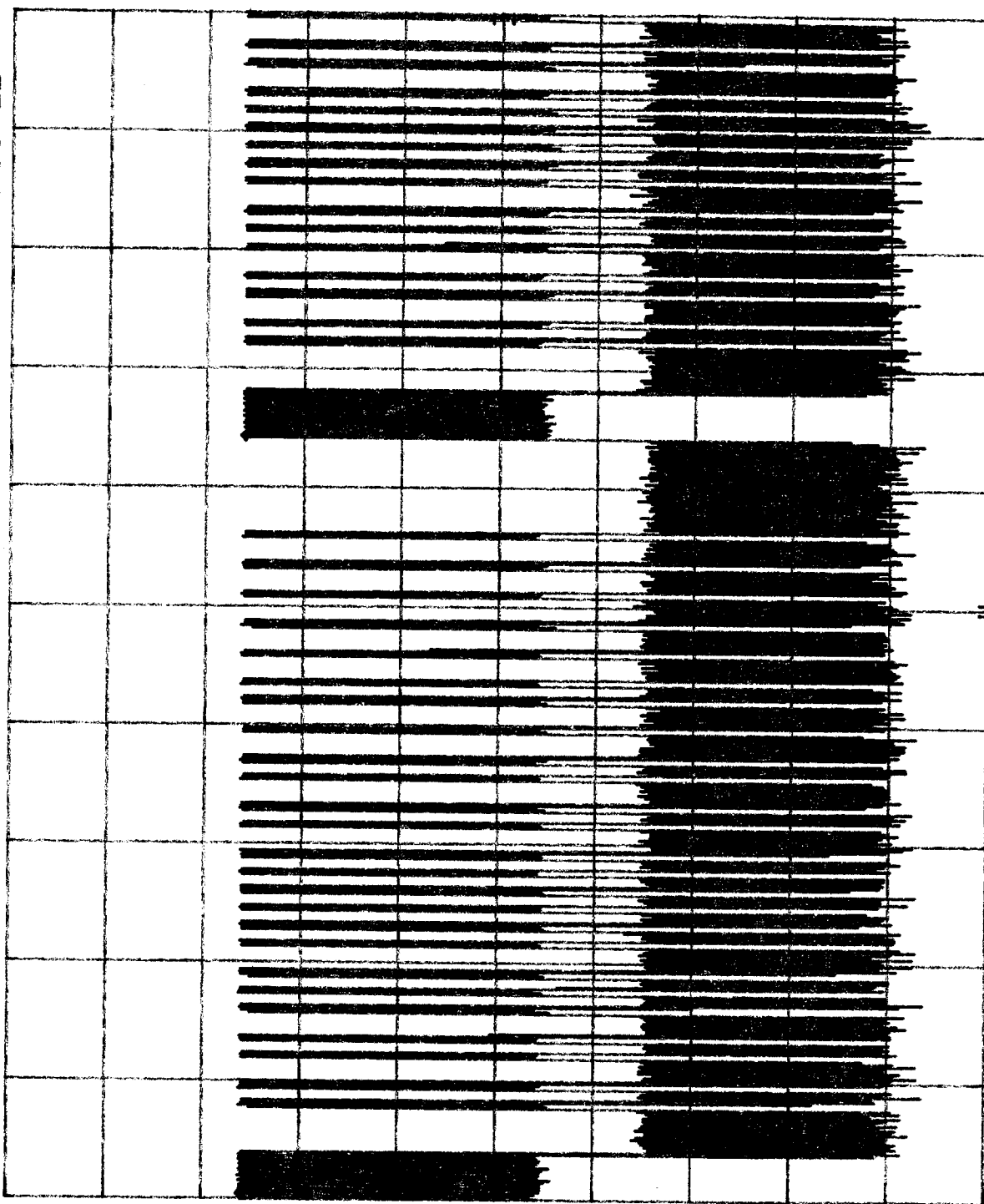


R-9851-1 X-10 RCU900RF DUTY CYCLE JK  
 REF 97.0 dBμV ATTN 0 dB  
 MKR Δ 64.20 msec  
 0.00 dB



SPAN 0 Hz  
 SWP 100 msec

VBW 3 MHz

CENTER 417.999 996 MHz  
 RES BW 3 MHz

|              |                                                                         |         |               |
|--------------|-------------------------------------------------------------------------|---------|---------------|
| Customer:    | X-10 Wireless Technology, Inc.                                          |         |               |
| Test Sample: | X-10 Handheld Pulsed RF Transmitter                                     |         |               |
| Model No.:   | RCU900RF                                                                | FCC ID: | B4SRCU900RF   |
| Test Method: | FCC Part 15 Sub. C, Paragraph 15.35(c) Duty Cycle Determination         |         |               |
| Notes:       | Marker readout shows cycle time (period) of pulse train<br>T = 64.2msec |         |               |
| Date:        | April 4th, 2003                                                         | Tech:   | J. kabacinski |
| Sheet:       | 1                                                                       | of:     | 2             |

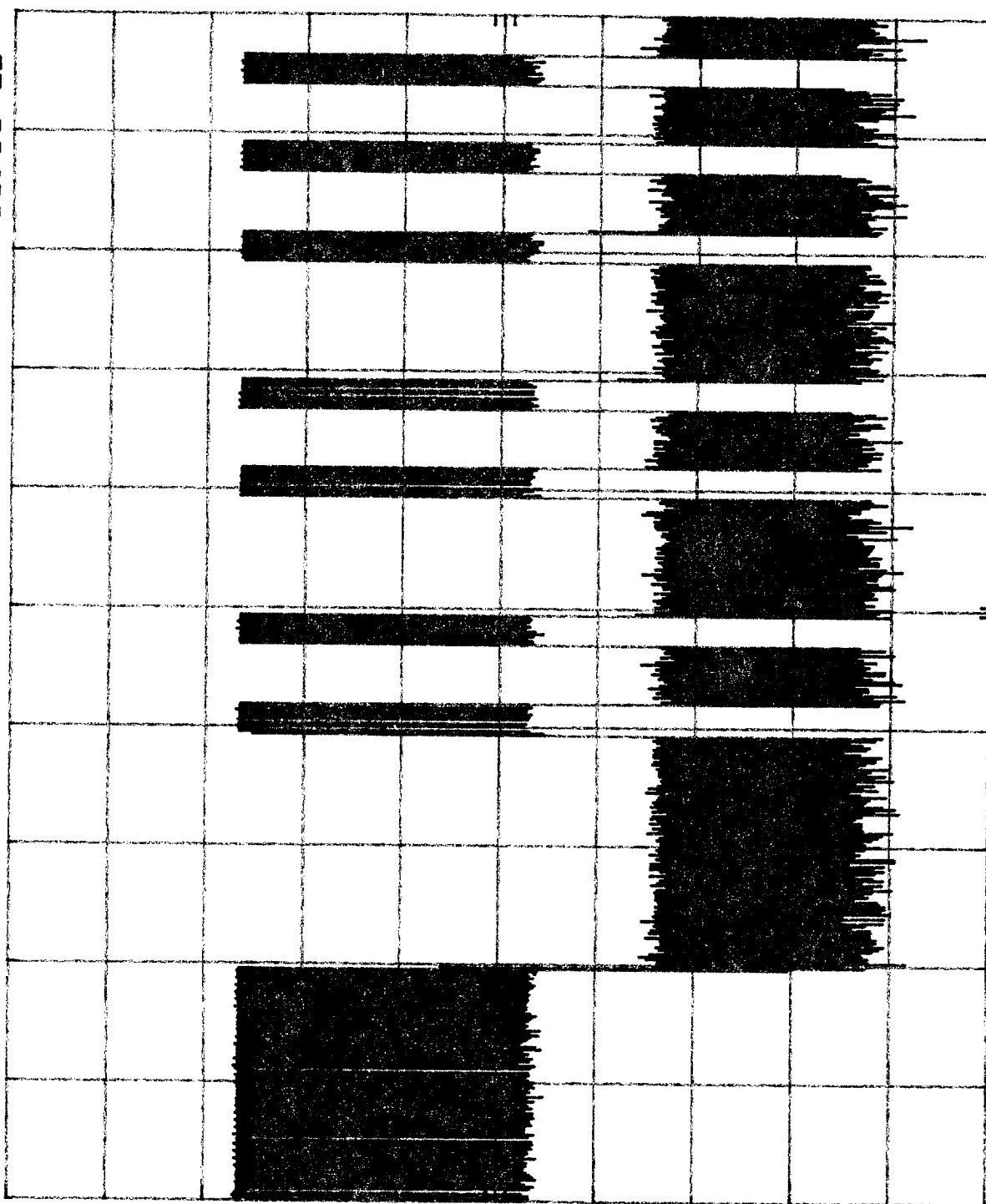


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Report No. R-9851-1

R-9851-1 X-10 RCU900RF DUTY CYCLE JK  
 REF 97.0 dBμV ATTEN 0 dB  
 MKR Δ 3.900 msec  
 -30.30 dB

hp  
 10 dB/



CENTER 417.999 996 MHz  
 RES BW 3 MHz  
 VBW 3 MHz  
 SWP 20.0 msec  
 SPAN 0 Hz

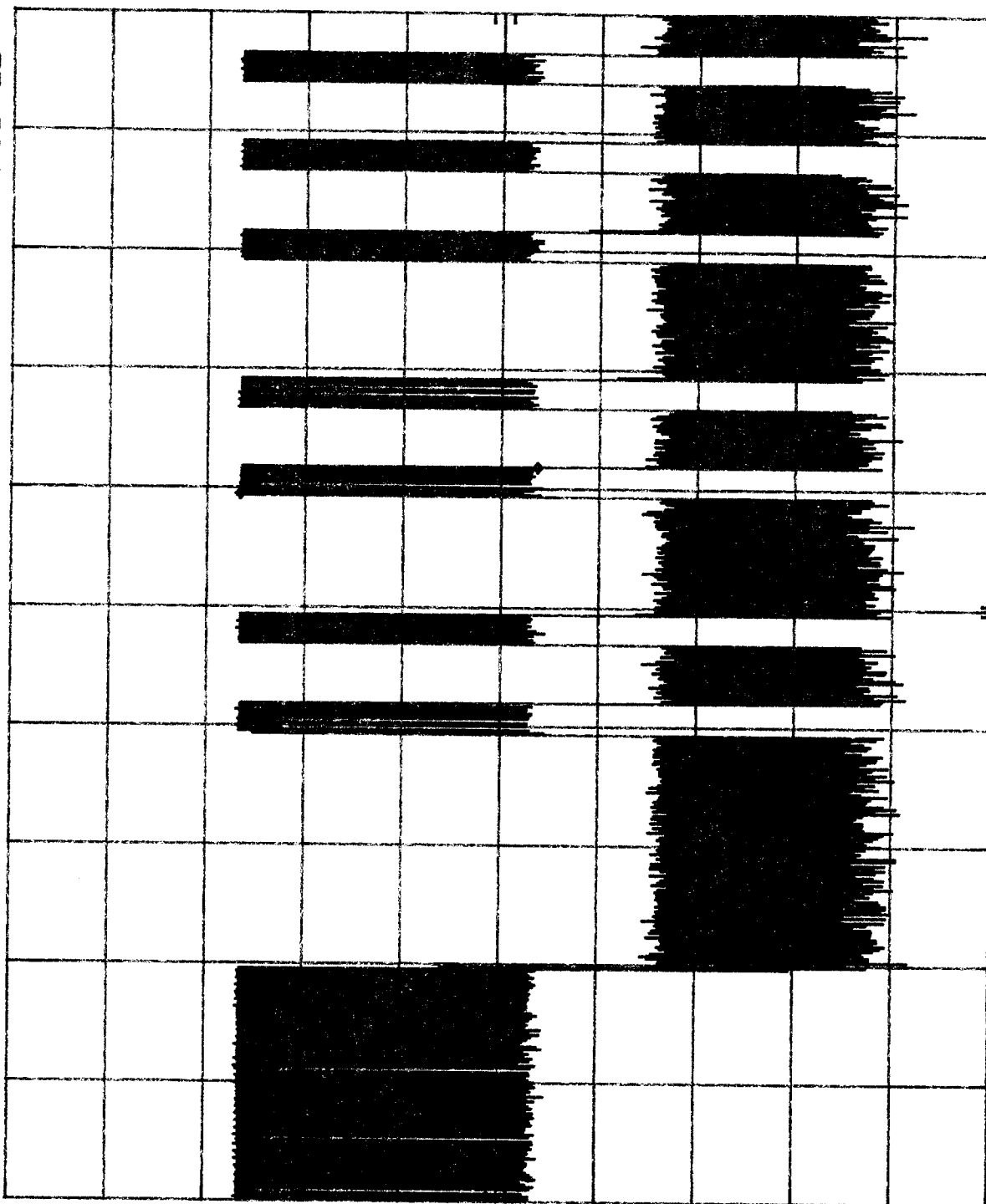
|              |                                                                              |         |               |
|--------------|------------------------------------------------------------------------------|---------|---------------|
| Customer:    | X-10 Wireless Technology, Inc.                                               |         |               |
| Test Sample: | X-10 Handheld Pulsed RF Transmitter                                          |         |               |
| Model No:    | RCU900RF                                                                     | FCC ID: | B4SRCU900RF   |
| Test Method: | FCC Part 15 Sub. C, Paragraph 15.35(c) Duty Cycle Determination              |         |               |
| Notes:       | Marker readout shows period of large pulse inside pulse train<br>T = 3.9msec |         |               |
| Date:        | April 4th, 2003                                                              | Tech:   | J. Kabacinski |
| Sheet        | 2                                                                            | of      | 2             |



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Report No. R-9851-1

R-9851-1 X-10 RCU900RF DUTY CYCLE JK  
 REF 97.0 dBμV ATTEN 0 dB  
 MKR Δ 450.0 μsec  
 -30.30 dB



SPAN 0 Hz  
 SWP 20.0 msec

VBW 3 MHz

CENTER 417.999 996 MHz  
 RES BW 3 MHz

|              |                                                                              |         |               |
|--------------|------------------------------------------------------------------------------|---------|---------------|
| Customer:    | X-10 Wireless Technology, Inc.                                               |         |               |
| Test Sample: | X-10 Handheld Pulsed RF Transmitter                                          |         |               |
| Model No:    | RCU900RF                                                                     | FCC ID: | B4SRCU900RF   |
| Test Method: | FCC Part 15 Sub. C, Paragraph 15.35(c) Duty Cycle Determination              |         |               |
| Notes:       | Marker readout shows period of small pulse inside pulse train<br>T = 460μsec |         |               |
| Date:        | April 4th, 2003                                                              | Tech:   | J. kabacinski |
| Sheet        | 3                                                                            | of      | 3             |



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Report No. R-9851-1

|                        |                                                                      |                |                 |
|------------------------|----------------------------------------------------------------------|----------------|-----------------|
| <b>Test Method:</b>    | FCC Part 15 Subpart C, Duty Cycle Determination, Paragraph 15.35 (c) |                |                 |
| <b>Customer:</b>       | X-10 Wireless Technology, Inc.                                       | <b>Job No.</b> | R-9851-1        |
| <b>Test Sample:</b>    | X-10 Handheld Pulsed RF Transmitter                                  |                |                 |
| <b>Model No.:</b>      | RCU900RF                                                             | <b>FCC ID:</b> | B4SRCU900RF     |
| <b>Operating Mode:</b> | Continuously Transmitting a 418 MHz Signal                           |                |                 |
| <b>Technician:</b>     | J. Kabacinski                                                        | <b>Date:</b>   | April 4th, 2003 |

**Steps:**

Adjusted on-times were calculated for both the long and short pulse trains within the pulse transmission, which were based on the duration of the pulses and the amount of times they occurred inside each long and short pulse trains. The adjusted on-time was then used to calculate the duty cycle of the pulse transmission. The duty cycle correction factor is highlighted in bold type. Formulas are given with numbered parameters referenced to show calculations.

| 1<br>Duration<br>Of<br>Pulses | 2<br>Pulse Count<br>Inside Long<br>Pulse Trains | 3<br>Long<br>Pulse Train<br>Count | 4<br>Adjusted on-<br>time of Large<br>Pulse train | 5<br>Pulse Count<br>Inside Short<br>Pulse Trains | 6<br>Short<br>Pulse Train<br>Count | 7<br>Adjusted on-<br>time of Short<br>Pulse trains |
|-------------------------------|-------------------------------------------------|-----------------------------------|---------------------------------------------------|--------------------------------------------------|------------------------------------|----------------------------------------------------|
| usec                          | #                                               | #                                 | msec                                              | #                                                |                                    | msec                                               |
|                               |                                                 |                                   | $(0.0086 \times 170) \times 1 =$                  |                                                  |                                    | $(0.0086 \times 29) \times 25 =$                   |
| 8.6                           | 170                                             | 1                                 | 1.46                                              | 29                                               | 25                                 | 6.23                                               |

| 8<br>Adjusted On-<br>Time of Pulse<br>Transmission | 9<br>Period of Pulse<br>Train (Cycle<br>Time) | 10<br>Final Duty<br>Cycle of Pulse<br>Transmission | 11<br>Duty Cycle<br>Correction<br>Factor |  |  |  |
|----------------------------------------------------|-----------------------------------------------|----------------------------------------------------|------------------------------------------|--|--|--|
|                                                    |                                               |                                                    |                                          |  |  |  |
| $1.46 + 6.23 =$                                    |                                               | $7.70/64.2 =$                                      | $= 20 \log 11.99$                        |  |  |  |
| 7.70                                               | 64.2                                          | 11.99                                              | <b>-18.43</b>                            |  |  |  |



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Retlif Job Number R-9851-1