

| SIGNAL NAME                                 | FRAME GATE CH | TEST POINT | LOGIC                | CYCLE   |          |          |          |          |          |           |          |          |          |         |         |
|---|---------------|------------|----------------------|---|----------|----------|----------|----------|----------|-----------|----------|----------|----------|---------|---------|
|   |               |            |                      | X RING 0P   | X RING 1 | X RING 2 | X RING 3 | X RING 4 | X RING 5 | X RING 0P | X RING 1 | X RING 2 | X RING 3 |         |         |
|   |               |            |                      | 3 6 9 0   | 3 6 9 0  | 3 6 9 0  | 3 6 9 0  | 3 6 9 0  | 3 6 9 0  | 3 6 9 0   | 3 6 9 0  | 3 6 9 0  | 3 6 9 0  | 3 6 9 0 | 3 6 9 0 |
| 1. -T DELTA T CYCLE                         | 01B2          |            | 31.21.11             | [Timing diagram for DELTA T CYCLE]                        |          |          |          |          |          |           |          |          |          |         |         |
| 2. B-REGISTER (WM) A4 (U)                   |               |            | 35.21.11             | [Timing diagram for B-REGISTER (WM) A4 (U)]               |          |          |          |          |          |           |          |          |          |         |         |
| 3. OP DECODE (WM) A4 (U)                    |               |            | 35.26.11             | [Timing diagram for OP DECODE (WM) A4 (U)]                |          |          |          |          |          |           |          |          |          |         |         |
| 4. +U U OP CODE                             | 01B2          |            | 35.26.11             | [Timing diagram for U OP CODE]                            |          |          |          |          |          |           |          |          |          |         |         |
| 5. +U EXECUTE ELIMINATE                     | 01B2          |            | 31.05.11             | [Timing diagram for EXECUTE ELIMINATE]                    |          |          |          |          |          |           |          |          |          |         |         |
| 6. A REGISTER A84 (X)                       |               |            | 70.11.21             | [Timing diagram for A REGISTER A84 (X)]                   |          |          |          |          |          |           |          |          |          |         |         |
| 7. +U -T UNIT SELECT LATCH. UNIT SELECT     | 02A2          |            | 70.11.21             | [Timing diagram for UNIT SELECT LATCH. UNIT SELECT]       |          |          |          |          |          |           |          |          |          |         |         |
| 8. -T TAPE + I MODE                         | 02A2          |            | 70.11.21             | [Timing diagram for TAPE + I MODE]                        |          |          |          |          |          |           |          |          |          |         |         |
| 9. +U T/O OPS                               | 01B2          |            | 31.09.21             | [Timing diagram for T/O OPS]                              |          |          |          |          |          |           |          |          |          |         |         |
| 10. +U A CYCLE ELIMINATION                  | 01B2          |            | 31.06.11             | [Timing diagram for A CYCLE ELIMINATION]                  |          |          |          |          |          |           |          |          |          |         |         |
| 11.   |               |            |                      | [Timing diagram]  |          |          |          |          |          |           |          |          |          |         |         |
| 12.   |               |            |                      | [Timing diagram]  |          |          |          |          |          |           |          |          |          |         |         |
| 13. +U UNIT SELECT GATE                     | 02A2          |            | 70.11.21             | [Timing diagram for UNIT SELECT GATE]                     |          |          |          |          |          |           |          |          |          |         |         |
| 14. A REGISTER I                            |               |            | 71.11.11             | [Timing diagram for A REGISTER I]                         |          |          |          |          |          |           |          |          |          |         |         |
| 15. +U SELECT TAPE UNIT (TAPE UNIT LATCH I) |               |            | 71.11.11             | [Timing diagram for SELECT TAPE UNIT (TAPE UNIT LATCH I)] |          |          |          |          |          |           |          |          |          |         |         |
| 16. -T B REGISTER WORD MARK                 | 01B2          |            | 70.11.21<br>31.07.11 | [Timing diagram for B REGISTER WORD MARK]                 |          |          |          |          |          |           |          |          |          |         |         |
| 17. +U U OP CODE GATE                       | 02A2          |            | 70.11.21             | [Timing diagram for U OP CODE GATE]                       |          |          |          |          |          |           |          |          |          |         |         |
| 18. A REGISTER CA4 (U)                      |               |            | 71.11.21             | [Timing diagram for A REGISTER CA4 (U)]                   |          |          |          |          |          |           |          |          |          |         |         |
| 19. +N REWIND UNLOAD TO TAU                 | 02A1          |            | 71.11.21             | [Timing diagram for REWIND UNLOAD TO TAU]                 |          |          |          |          |          |           |          |          |          |         |         |
| 20. +U GATED WORD MARK                      | 01B2          |            | 31.07.11             | [Timing diagram for GATED WORD MARK]                      |          |          |          |          |          |           |          |          |          |         |         |
| 21. +U SET T OP LATCH                       | 01B2          |            | 31.30.11             | [Timing diagram for SET T OP LATCH]                       |          |          |          |          |          |           |          |          |          |         |         |
| 22. -T TAPE CLOCK                           | 02A1          |            | 71.31.21             | [Timing diagram for TAPE CLOCK]                           |          |          |          |          |          |           |          |          |          |         |         |
| 23.   |               |            |                      | [Timing diagram]  |          |          |          |          |          |           |          |          |          |         |         |
| 24. +U UNIT RESET                           | 02A2          |            | 70.11.21             | [Timing diagram for UNIT RESET]                           |          |          |          |          |          |           |          |          |          |         |         |

|         |            |         |            |                                      |                      |
|---------|------------|---------|------------|--------------------------------------|----------------------|
| DATE    | CHANGE NO. | DATE    | CHANGE NO. | INTERNATIONAL BUSINESS MACHINES CORP |                      |
| 4-10-62 | 113639 D   | 31.7.62 | TA 1370 K  | NAME                                 | FIGURE 46 TIMING FOR |
|         |            |         |            | REWIND AND UNLOAD TAPE OPERATION     |                      |
| DESIGN  |            | TYPE    |            | SCALE                                | NONE                 |
| DETAIL  |            | DRAW    | VE         | 1-12-62                              |                      |
| CHECK   |            | CHECK   |            |                                      |                      |
| APPRO   |            |         |            |                                      |                      |