

(c) In all other cases, dividends shall be cumulative from the dividend payment date next preceding the date of issue of such shares unless the shares are issued during the period commencing immediately after the record date for a dividend on shares of such series and terminating at the close of the payment date for such dividend in which case dividends shall be cumulative from the latter payment date.

SECTION 5. *Redemption Prices.* The shares of Series 3 shall not be redeemable by the Corporation prior to January 1, 1976. Thereafter the redemption prices for shares of Series 3 shall be as follows:

If the Redemption Date Is During 12-Month Period Beginning January 1		If the Redemption Date Is During 12-Month Period Beginning January 1	
	Redemption Price		Redemption Price
1976	\$105.00	1981	\$102.50
1977	104.50	1982	102.00
1978	104.00	1983	101.50
1979	103.50	1984	101.00
1980	103.00	1985	100.50
		1986 and thereafter	100.00

SECTION 6. *Liquidation Rights.* The amount payable on shares of Series 3 in the event of any voluntary liquidation, dissolution or winding up of the affairs of the Corporation prior to January 1, 1976 shall be \$105 per share and thereafter shall be an amount equal to the redemption price for shares of Series 3 in effect on the distribution date, and in the event of any involuntary liquidation, dissolution or winding up of the Corporation shall be \$40 per share.

SECTION 7. *Conversion Right.* (a) Subject to and upon compliance with the provisions of this Section 7, shares of Series 3 may at the option of the holder at any time (or, in the case of shares called for redemption, then until and including the close of business on the date fixed for redemption but not thereafter if payment of the redemption price has been duly provided for by the date fixed for redemption) be converted into fully paid and non-assessable shares (calculated to the nearest 1/100th of a share) of Common Stock at the rate of 1.862 shares of Common Stock for each share of Series 3.

(b) The holder of each share of Series 3 may exercise the conversion privilege in respect thereof by delivering to any transfer agent of Series 3 the share to be converted accompanied by written notice that the holder elects to convert such share. Conversion shall be deemed to have been effected immediately prior to the close of business on the date when such delivery is made, and such date is referred to in this Section 7 as the "conversion date". On the conversion date or as promptly thereafter as practicable the Corporation shall issue and deliver to the holder of shares of Series 3 surrendered for conversion, or on his written order, a certificate for the number of full shares of Common Stock issuable upon the conversion of such shares of Series 3 and a check or cash in respect of any fraction of a share as provided in subparagraph (E) of this Section 7. The person in whose name the stock certificate is to be issued shall be deemed to have become a holder of Common Stock of record on the conversion date. No adjustment shall be made for any dividends on such shares of Series 3 or for dividends on the shares of Common Stock issued on conversion.

(c) The number of shares of Common Stock and the number of shares of other classes of stock of the Corporation, if any, into which each share of Series 3 is convertible shall be subject to adjustment from time to time only as follows:

(A) In case the Corporation shall at any time or times after June 10, 1968 (1) take a record of the holders of Common Stock for the purpose of entitling them to receive a dividend declared payable in shares of Common Stock and thereafter pay such dividend, (2) subdivide or split the outstanding shares of Common Stock, (3) combine the outstanding shares of Common Stock into a smaller number of shares or (4) issue by reclassification of Common

Stock any shares of the Corporation, each holder of a share of Series 3 shall thereafter be entitled upon the conversion of each share thereof held by him to receive for each such share the number of shares of the Corporation which he would have owned or have been entitled to receive in respect thereof after the happening of the event or events described above which shall have happened had such share of Series 3 been converted prior to the happening of such event or events, the adjustment to become effective immediately at the opening of business on the day next following (x) the record date for purposes of clause (1), or (y) the day upon which such subdivision, split, combination or reclassification shall become effective for purposes of clauses (2), (3) and (4).

(B) In case the Corporation shall at any time or times after June 10, 1968 take a record of the holders of Common Stock for the purpose of entitling them to receive a distribution of evidences of indebtedness or stock or other securities or assets (excluding cash dividends payable out of consolidated earnings or consolidated earned surplus and distributions of the types specified in clauses (1), (2) and (4) of subparagraph (A) of this Section 7) or rights or warrants to subscribe thereto (excluding those referred to in subparagraph (C) of this Section 7), the number of shares of Common Stock into which each share of Series 3 shall thereafter be convertible shall be adjusted by multiplying the number of shares of Common Stock into which such share of Series 3 was theretofore convertible by a fraction, of which the numerator shall be the current market price per share of Common Stock (as defined in subparagraph (D) of this Section 7) at such record date and of which the denominator shall be such current market price per share of Common Stock less the fair market value (as determined by the Directors, whose determination shall be conclusive) of that portion of such evidences of indebtedness or stock or other securities or assets so distributed or of such subscription rights or warrants applicable to one share of Common Stock. Such adjustment shall be made whenever such distribution is made or such rights or warrants are issued, as the case may be, and upon such distribution or issuance shall become effective immediately after the record date for the determination of shareholders entitled to receive such distribution or rights or warrants. For purposes of this subparagraph (B), consolidated earnings or consolidated earned surplus shall be computed by adding thereto all charges against consolidated earned surplus on account of dividends paid in shares of Common Stock in respect of which an adjustment has been made pursuant to subparagraph (A) of this Section 7, all as determined by the independent public accountants then regularly auditing the accounts of the Corporation, whose determination shall be conclusive.

(C) In case the Corporation shall at any time after June 10, 1968 issue rights or warrants to all holders of Common Stock entitling them (for a period expiring within 60 days after the record date for determination of shareholders entitled to receive such rights or warrants) to subscribe for or purchase shares of Common Stock at a price per share less than the current market price per share of Common Stock (as defined in subparagraph (D) of this Section 7) at such record date, the number of shares of Common Stock into which each share of Series 3 shall thereafter be convertible shall be determined by multiplying the number of shares of Common Stock into which such shares of Series 3 was theretofore convertible by a fraction, of which the numerator shall be the number of shares of Common Stock outstanding on the date of issuance of such rights or warrants plus the number of additional shares of Common Stock offered for subscription or purchase and of which the denominator shall be the number of shares of Common Stock outstanding on the date of issuance of such rights or warrants plus the number of shares of Common Stock which the aggregate offering price of the total number of shares so offered would purchase at such current market price. Such adjustment shall be made whenever such rights or warrants are issued and upon such issuance shall become effective immediately after the record date for the determination of shareholders entitled to receive such rights or warrants.

(D) For the purpose of any computation under subparagraph (B) or (C) of this Section 7, the current market price per share of Common Stock at any date shall be deemed to be the average of the daily closing prices for the thirty consecutive business days commencing

forty-five business days before the day in question. The closing price for each day shall be the last reported sales price regular way on the relevant securities exchange or, if there is no reported sale on such day, the mean of the reported closing bid and asked quotations on the relevant securities exchange on the day, or, with respect to any such day when the Common Stock is not listed on any national securities exchange, the mean of the closing bid and asked quotations in the over-the-counter market on such day as reported by the National Quotation Bureau or similar reporting service. For purposes of this subparagraph (D) and subparagraph (E) of this Section 7, "relevant securities exchange" shall mean the New York Stock Exchange unless the Common Stock is not then listed thereon, in which event it shall mean the principal national securities exchange on which the shares of Common Stock are listed or admitted to trading as determined by the Corporation, which determination shall be conclusive.

(E) The Corporation shall not be required to issue fractional shares of Common Stock upon conversion of shares of Series 3. If more than one share of Series 3 shall be surrendered for conversion at one time by the same holder, the number of full shares of Common Stock issuable upon conversion thereof shall be computed on the basis of the aggregate number of shares so surrendered. If any fractional interest in a share of Common Stock would be deliverable upon the conversion of any shares of Series 3, the Corporation shall in lieu of delivering the fractional share therefor make an adjustment therefor in cash at the market value thereof. For such purpose, the market value of a share of Common Stock shall be the last reported sale price regular way on the relevant securities exchange on the last business day prior to the conversion date when the relevant securities exchange is open, or, if there is no reported sale on such day, the mean of the reported closing bid and asked quotations on the relevant securities exchange on that day, or, if the Common Stock is not then listed on any national securities exchange, the mean of the closing bid and asked quotations in the over-the-counter market on that day as reported by the National Quotation Bureau or similar reporting service. This subparagraph (E) shall not apply for purposes of making adjustments under subparagraphs (A), (B) and (C) of this Section 7.

(F) No adjustment in the number of shares of Common Stock into which each share of Series 3 is convertible shall be required unless such adjustment would require an increase or decrease of at least 1/1000th of a share in the number of shares of Common Stock into which such share is then convertible; provided, however, that any adjustments which by reason of this subparagraph (F) are not required to be made shall be carried forward and taken into account in any subsequent adjustment.

(G) Whenever any adjustment is required in the shares into which each share of Series 3 is convertible, the Corporation shall forthwith keep available at each of its transfer agencies at which Series 3 is convertible a statement describing in reasonable detail the adjustment and the method of calculation used. The Corporation shall also cause a notice, stating that such adjustment has been effected and setting forth the adjusted conversion price, to be published at least once in a newspaper printed in the English language and customarily published at least once a day for at least five days in each calendar week which shall be of general circulation in the Borough of Manhattan, the City of New York (herein called an "Authorized Newspaper").

(H) As evidence of the kind and amount of stock or other securities, cash or property into which shares of Series 3 shall be convertible, or as to the appropriate adjustments of the conversion rate applicable with respect thereto, each transfer agent of Series 3 may accept the certificate of any firm of independent public accountants (who may be the regular auditors retained by the Corporation) with respect thereto, who as to questions of law may request and rely upon an opinion of counsel (who may be counsel for the Corporation) and in the absence of bad faith upon the part of the transfer agent, it may conclusively rely thereon, and shall not be responsible or accountable to any holder of shares of Series 3 for any provision in conformity therewith, or approved by such firm of independent public accountants.

(d) The Corporation shall at all times reserve and keep available out of the authorized but unissued shares of Common Stock the full number of shares of Common Stock into which all shares of Series 3 from time to time outstanding are convertible, but shares of Common Stock held in the treasury of the Corporation may in its discretion be delivered upon any conversion of shares of Series 3.

(e) The issue of stock certificates on conversions of shares of Series 3 shall be without charge to the converting shareholder for any tax in respect of the issue thereof. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issue and delivery of shares in any name other than that of the holder of the shares of Series 3 converted, and the Corporation shall not be required to issue or deliver any such stock certificate unless and until the person or persons requesting the issue thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid.

(f) In case the total amount of cash dividends paid by the Corporation in any quarter-annual period on the number of shares of Common Stock into which each share of Series 3 shall be convertible at the time of such payment exceeds \$1.125, it shall cause notice thereof to be published at least once in an Authorized Newspaper.

DIVISION D

Express Terms of Common Stock

The Common Stock shall be subject to the express terms of the Serial Preference Stock and any series thereof and to the express terms of the Serial Preference Stock II and any series thereof. Each share of Common Stock shall be equal to every other share of Common Stock; and the holders thereof shall be entitled to one vote for each share of such stock on all questions presented to the shareholders.

The holders of shares of Common Stock shall have no pre-emptive right to purchase or have offered to them for purchase any shares of Common Stock or other securities of the Corporation whether now or hereafter authorized.

Fifth: The Corporation may from time to time, pursuant to authorization by its Board of Directors and without action by the shareholders, purchase or otherwise acquire shares of the Corporation of any class; subject, however, to such limitation or restriction, if any, as is contained in the express terms of any class of shares of the Corporation outstanding at the time of such purchase or acquisition.

Sixth: Any and every statute of Ohio hereafter enacted whereby the rights, powers or privileges of corporations or of the shareholders of corporations organized under the laws of Ohio are increased or diminished or in any way affected, or whereby effect is given to the action taken by any number, less than all, of the shareholders of any such corporation, shall apply to the Corporation and shall be binding not only upon the Corporation but upon every shareholder of the Corporation to the same extent as if such statute had been in force on October 31, 1958, the time of merger of The Ramo-Wooldridge Corporation into the Corporation.

Seventh: These Amended Articles of Incorporation shall supersede and take the place of the heretofore existing Articles of Incorporation of the Corporation and all amendments thereto.

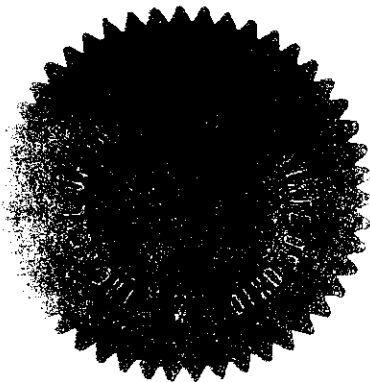
UNITED STATES OF AMERICA,
STATE OF OHIO,
OFFICE OF THE SECRETARY OF STATE. }

I, SHERROD BROWN,
Secretary of State of the State of Ohio, do hereby certify that the foregoing is an
exemplified copy, carefully compared by me with the original record now in my
official custody as Secretary of State, and found to be true and correct, of the

CERTIFICATE of AMENDED ARTICLES OF INCORPORATION
OF
TRW INC.
(Ohio corporation, Charter # 40406)

filed in this office on the 7TH day of JUNE A.D. 1983.
and recorded on (in) Roll (Volume) F 0263, Frame (Page) 1709 of
the Records of Incorporations.

These AMENDED ARTICLES of Incorporation supersede and take the place of the existing
Amended Articles of Incorporation of the Corporation and the Original Articles of
Incorporation filed on June 17, 1916, as heretofore amended.



WITNESS my hand and official seal at
Columbus, Ohio, this 24TH day
of JUNE A.D. 19 83.

Sherrod Brown

SHERROD BROWN
Secretary of State