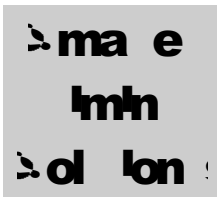

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3U FLV &l 7LPH DQG)UHTXHQF\ 6WDQGDUG

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1RUWKSRLQW 3DUNZD\
6DQWD 5DQBD(D)Tj 4.96 0 Td(D)Tj 416. 0 Td(5)Tj F781
K.24 -11.28 Td(D)Tj 036 0F781 LW

7KDQN \RX IRU SXUFKDVLQJ WKH 3U FLV &I 7LPH DQG)UHTXHQF\ 6WDQGDUG 2XU JRDO LQ GHYHORS

Abo I gman al

7KLV PDQXDO ZLOO JXLGH \RX WKURXJK VLPSOH LQVWDOODWLRQ DQG VHW XS SURFHGXUHV

,QWURGXFWLRQ ² 7KH 3U FLV &I KRZ LW ZRUNV ZKHUH WR XVH LW LWV PDLQ IHDWXUHV
%DVLF ,QVWDOODWLRQ ² +RZ WR WHVW RSHUDWLRQ DQG FRQQHFW \RXU 3U FLV &I WR \RXU HTXLSPHQW
6HWWLQJ 8S ZLWK &RPSXWHU² 7KUHH VHFWLRQV RQH IRU 8QL[OLNH SODWIRUPV DQG WZR IRU : LQGRZV 17
2SHUDWLRQ ² ' HWDLOV RI WKH VRIWZDUH DQG KDUGZDUH RSHUDWLRQ

,I \RX GHWHFW DQ\ LQDFFXUDFLHV RU RPLVVLRQV SOHDVH LQIRUP XV (QG5XQ 7HFKQR0RJLHV FDQQRW EH KH0G UH VSRQVLE0H IRU DQ\ WHF

Table of Contents

CHAPTER 1

Introduction 1

CDMA Timing--How it Works 1

Where to Use It 3

Main Features 3

CHAPTER 2 5

Basic Installation 5

Checking and Identifying the Hardware 5

Præcis Cf Physical Description 6

Performing an Initial Site Survey 7

Connecting Computers to the Præcis Cf 8

Mount the Præcis Cf 8
Connect the Serial Port 8
Test the Serial Port 8

Connecting Instruments to the Præcis Cf 10

CHAPTER 3 11

Serial I/O Control and Status Commands 11

General Serial I/O Operation 11

Available Commands 12

Detailed Command Descriptions 15

CAL 15
CHANNELSET 15
CTIME 16
DSTSTART 16
DSTSTOP 17
EMUL 17
EVENT 17
FLTSTAT 18
HELP 20
LEAP 20
LO 21
OSCTYPE 21
PORT 22
PPSWIDTH 22
REACQUIRE 22
RESET 23
RESPMODE 23
SETTINGS 23
SPSTAT 24
TIME 25
TMODE 25
UPLOAD 26

Signal Quality Mode 60

APPENDIX C **63**

Technical Specifications **63**

In od c lon

KH 3U FLV &I LV D SUHFLVLRQ VRXUFH RI 8QLYHUVD0 &RRUGLQDWHG 7LPH 87& DQG)UHTXHQF\ WKDW SURYLGHV 3X0VH 3HU 6HFRQG 336 DQG 0+] RXWSXWV ,QVWUXPHQWDWLRQ DSS0LFDWLRQV PD\ XVH WKHVH VLJQD0V WR DFKLHYH WLPH V\QFKURQL]DWLRQ WR W\SLFD00\ 0HVV WKDQ WHQ PLFURVHFRQGV DQG IUHTXHQF\ V\QWRQL]DWLRQ WR 0HVV WKDQ RQH SDUW LQ [11]

,Q DGGLWLRQ WKH 3U FLV &I SURYLGHV WKH VDPH FRPSXWHU WLPH V\QFKURQL]DWLRQ IXQFWLRQ D0LW\ RI LWV VLVWHU SURGXFW WKH 3U FLV &I DQG FDQ EH FRQQHFWHG WR DQ\ FRPSXWHU KDYLQJ DQ 56 VHULD0 , 2 SRUW ,Q LWV PRVW EDVLF RSHUDWLRQ LW EURDGFDVWV DQ $6&,, WLPH RI GD\ PHVVDJH HDFK VHFRQG ZLWK D VSHFLILF FKDUDFWHU EHLQJ WKH ¶RQ WLPH· FKDUDFWHU 7KH WUDQVPLVVLRQ WLPH RI WKLV FKDUDFWHU LV DFFXUDWH WR 0HVV WKDQ RQH PL00LVHFRQG 0RUH FULWL FD0 FRPSXWHU WLPH V\QFKURQL]DWLRQ DSS0LFDWLRQV XVLQJ WKH 1HWZRUN 7LPH 3URWRFR0 173 PD\Q\ FDQ NTS 5.(3)T61 0 Td(F)Tj4.808 0 Td(V)Tj4.08 0 Td

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Basic Installation

7KLV FKDSWHU ZLOO JXLGH \RX WKURXJK WKH PRVW EDVLF FKHFNRXW DQG SK\VLFDO LQVWDO ODWLRQ RI \RXU 3U FLV &I 6XEVHTXHQW FKDSWHUV DQG DSSHQGLFHV ZLOO JLYH \RX WKH LQIRUPDWLRQ QHHGHG WR FRQILJXUH \RXU LQVWDOODWLRQ IRU WKH PD[LPXP SHU IRUPDQFH LQ \RXU RSHUDWLQJ HQYLURQPHQW

Checkin and Identifying Hardware

8QSDFN DQG FKHFN DOO WKH LWHPV XVLQJ WKH IROORZLQJ FKHFN OLVW &RQWDFW WKH IDFWRU\ LI DQ\WKLQJ LV PLVVLQJ RU GDPDJHG

7KH 3U FLV &I +DUGZDUH 3DFN SDUW RU YDULDQW FRQWDLQV

- 3U FLV &I SDUW RU YDULDQW
- 3U FLV &I 8VHU·V 0DQXDO SDUW 860
- $& WR 9 ' & 3RZHU 6XSSO\ SDUW
- : DOO PRXQW DGDSWHU SDUW
- 6HOI DGKHVLYH YHOFUR VWULSV SDUW
- 5- WR 5- &$7 SDWFK FDEOH PHWHUV SDUW
- 5- WR ' %) DGDSWHU SDUW
- 0DJQHWLF PRXQW DQWHQQD FDEOH DVVHPEO\ SDUW

,I WKLV VHTXHQFH KDV QRW RFFXUUHG ZLWKLQ WZHQW\ PLQXWHV \RX VKRXOG PRYH WKH XQLW DQG RU FKDQJH LWV RULHQWDWLRQ DQG UH WU\ ,I \RX DUH XQDEOH WR ILQG D 0RFDWLRQ ZKHUH WKH XQLW ZLOO DFTXLUH WKH & ' 0 $ VLJQDO \RX PD\ QRW KDYH FRYHUDJH LQ \RXU DUHD RU WKH VLJQDO PLJKW EH WRR ZHDN LQ \RXU IDFLOLW\ <RX VKRXOG FRQWLQXH WR WU\ IRU DW 0HDVW D GD\ KRZHYHU VLQFH EDVH VWDWLRQV DUH WDNHQ GRZQ IRU VHUYLFH IURP WLPH WR WLPH

,I \RX KDYH D FH00X0DU & ' 0 $ SKRQH VHH LI LW ZLOO ZRUN LQ GLJLWDO PRGH ,I LW ZLOO WKHQ \RXU 3U FLV &I PD\ EH GDPDJHG DQG VKRX0G EH UHWXUQHG WR WKH IDFWRU\ IRU UHSDLU RU H[FKDQJH

Connec In Comp e so e æcI C

Mo n e æcI C

8VLQJ HLWKHU WKH ZD00 PRXQW DGDSWHU RU WKH YH0FUR VWULSV PRXQW WKH XQLW LQ WKH SUHYL RXV0\ VXUYH\HG 0RFDWLRQ QHDU WKH FRPSXWHU 0DNH VXUH WKDW WKH DQWHQQD LV QRW E0RFNHG E\ PHWD00LF REMHFWV WKDW DUH F0RVHU WKDQ DERXW RQH PHWHU ,GHD00\ LW VKRX0G EH PRXQWHG YHUWLFD00\ DV WKH WUDQVPLWWHG VLJQDOV DUH YHUWLFD00\ SR0DUL]HG : KHQ LQGRRUV KRZHYHU PX0LSDWK FRQGLWLRQV PD\ H[LVW 7KLV PHDQV WKDW UHI0HFWHG VLJQDOV PD\ EH SUHVHQW ZLWK HLWKHU YHUWLFD0 RU KRUL]RQWD0 SR0DUL]DWLRQ VR \RXU XQLW PLJKW ZRUN LQ HLWKHU RULHQWDWLRQ $IWHU PRXQWLQJ WKH XQLW YHULI\ WKDW LW ZL00 VWL00 DFTXLUH DQG WUDFN WKH & ' 0 $ VLJQDO0V

Connec e e lal o

6KXWGRZQ WKH FRPSXWHU DQG GLVFRQQHFW SRZHU IURP WKH 3U FLV &I

&RQQHFW RQH HQG RI WKH 5- &$7 SDWFK FDE0H WR WKH VHULD0 , 2 WDFN RQ WKH 3U FLV &I &RQQHFW WKH RWKHU HQG RI WKH 5- &$7 SDWFK FDE0H WR WKH 5- WDFN RQ WKH 5- WR ' %) DGDSWHU FRQQHFWRU

&RQQHFW WKH ' %) FRQQHFWRU WR WKH DSSURSULDWH VHULD0 , 2 SRUW RQ WKH FRP SXWHU ,I WKH VHULD0 , 2 SRUW RQ \RXU FRPSXWHU GRHV QRW KDYH D ' % 0 FRQ QHFWRU \RX PD\ QHHG WR XVH DQ DGDSWHU 5HIHU WR &KDSWHU ² 6HULD0 , 2 &RQWUR0 DQG 6WDWXV &RPPDQGV IRU GHWDLOV RQ WKH VLJQD0 ZLUHG 5HPHPEHU ZKLFK SRUW \RX DUH XVLQJ EHFDXVH \RX Z00 QHHG WR NQRZ WKDW LQ RUGHU WR VHW XS WKH WHUPLQD0 VRIWZDUH

3RZHU XS WKH FRPSXWHU

e s e e lal o

7R WHVW VHULD0 FRPPXQLFDWLRQV ZLWK WKH 3U FLV &I \RX Z00 QHHG D WHUPLQD0 SURJUDP <RX PXVW FRQILJXUH \RXU WHUPLQD0 SURJUDP WR XVH WKH VHULD0 , 2 SRUW \RX XVHG LQ &RQ QHFW WKH 6HULD0 3RUW <RX PXVW D0VR FRQILJXUH \RXU WHUPLQD0 SURJUDP WR XVH WKH FRUUHFW EDXG UDWH QXPEHU RI GDWD ELWV SDULW\ W\SH DQG QXPEHU RI VWRS ELWV 7XUQ RII DQ\ KDQGVKDNLQJ 7KH IDFWRU\ GHIDX0W VHWWLQJV IRU WKH 3U FLV &I DUH

- LV WKH %DXG 5DWH
- LV WKH 1XPEHU RI ' DWD %LWV

- 1RQH LV WKH 3DULW\
- LV WKH 1XPEHU RI 6WRS %LWV

$IWHU FRQILJXULQJ WKHVH SDUDPHWHUV LQ \RXU WHUPLQDO SURJUDP DSSO\ SRZHU WR WKH 3U FLV &I :LWKLQ D IHZ VHFRQGV \RXU WHUPLQDO SURJUDP VKRXOG GLVSOD\ D VHTXHQFH RI ERRW PHVVDJHV VLPLODU WR WKHVH

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ae    1 ae  60 0-0000-000 v  .00 -   06  000   3  03
ae  C  W 60 0-000 -00  v  .00 -   0   000  6 4  39
ae    A 60 0-000 -000 v 0
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7KH ILUVW OLQH JLYHV WKH SDUW QXPEHU DQG YHUVLRQ RI WKH 3U FLV %RRW/RDGHU ILUPZDUH DQG WKH GDWH DQG WLPH RI LWV FRPSLODWLRQ 7KH VHFRQG OLQH JLYHV WKH SDUW QXPEHU DQG YHUVLRQ RI WKH 3UDHFLV &I DSSOLFDWLRQ ILUPZDUH DQG WKH GDWH DQG WLPH RI LWV FRPSLODWLRQ 7KH WKLUG OLQH JLYHV WKH SDUW QXPEHU DQG YHUVLRQ RI WKH DQ

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/) ! LV /LQH)HHG FRQWURO FKDUDFWHU [$

,QLWLDO\ \RX VKRXOG VHH WKDW WKH 7) 2 0 FKDUDFWHU LV D ¶ · : KHQ WKH JUHHQ / (' EHJLQV WR IODVK DW WKH +] UDWH \RX VKRXOG VHH WKH FKDUDFWHU FKDQJH WR D ¶ · ZKLFK PHDQV WKDW WKH WLPH LV DFFXUDWH WR 0HVV WKDQ PLFURVHFRQGV DQG WKH IUHTXHQF\ LV SKDVH 0RFNHG

,I \RX GR QRW VHH FKDUDFWHUV GLVS0D\HG E\ \RXU WHUPLQDO SURJUDP ZKHQ WKH XQLW LV SRZHUHG XS \RX PXVW WURXE0HVKRRW \RXU VHWXS $Q LQFRUUHFW\ ZLUHG FDE0H LV WKH PRVW FRPPRQ SURE0HP 5HIHU WR &KDSWHU ² 6HULD , 2 &RQWURO DQG 6WDWXV &RPPDQGV IRU WKH VLJQDO FRQQHFWLRQV IRU WKH 3U FLV &I

No e

,W LV QRW QHFHVVDU\ WR XVH D QX00 PRGHP FDE0H RU DGDSWHU ZLWK WKH 3U FLV &I

,I \RX DUH XQDE0H WR ILQG DQ\ HUURUV LQ \RXU VHWXS DV D 0DVW UHVRUW \RX VKRX0G UHVWRUH WKH IDFWRU\ GHIDX0W VHWWLQJV WR WKH 3U FLV &I ,W LV SRVVLE0H WKDW LWV VHULD0 SRUW SDUDPHWHUV DUH LQFRUUHFW VR UHVWRULQJ WKH IDFWRU\ GHIDX0W VHWWLQJV ZL00 FRUUHFW WKDW 5HIHU WR $SSHQGL[% ² ,QLFDWRU 0RGH %XWWRQ IRU WKH SURFHGXUH WR UHVWRUH WKH IDFWRU\ GHIDX0W VHWWLQJV

2QFH \RX KDYH VXFFHVV0IX00\ HVWDE0LVKHG FRPPXQLFDWLRQV ZLWK WKH 3U FLV &I \RX PD\ SURFHHG WR LQVWD00LQJ DQG FRQILJXULQJ WKH VRIWZDUH \RX LQWHQG WR XVH WR V\QFKURQL]H \RXU FRPSXWHU·V F0RFN WR 87&

Connec In In s men so e æcI sC

7KH 3U FLV &I SURYLGHV WZR SUHFLVLRQ RXWSXW VLJQD0V FDSDE0H RI GULYLQJ SURSHU0\ WHUPL QDWHG FRD[LD0 FDE0HV 336 DQG 0+] 7KHVH WZR VLJQD0V DUH ' & FRXS0HG DQG VRXUFHG IURP $GYDQFHG &0 26 $&0 26 GULYHUV ZKLFK DUH DE0H WR PDLQWDLQ RXWSXW 77/ 0HYH0V LQWR D RKP 0RDG 7KH

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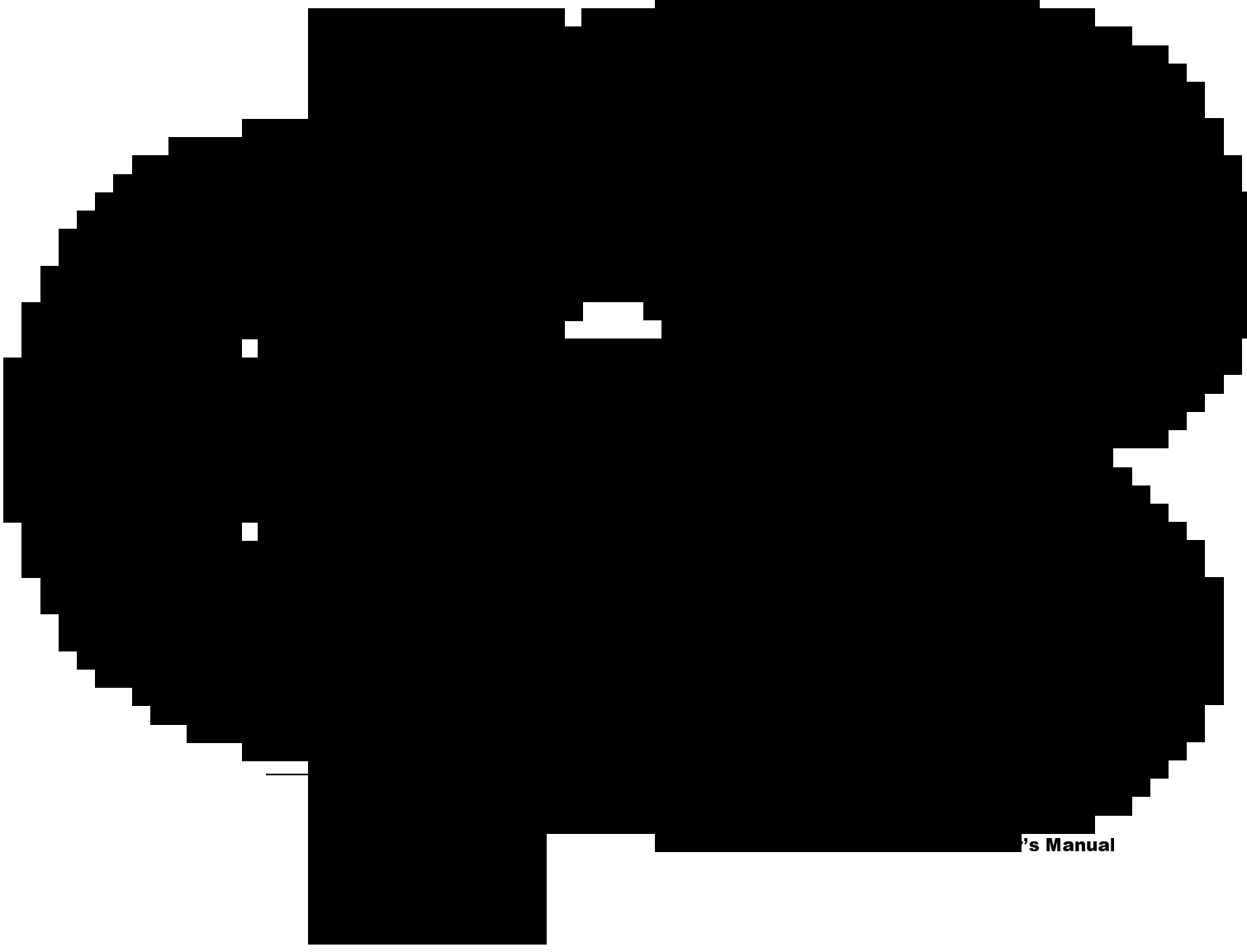
a s Command s

KLV DSSHQGL[GHVFULEHV WKH $6&,, SURWRFRO VXSSRUWHG E\ WKH 3U FLV &I ,Q
DGGLWLRQ WR WKH 3U FLV &I ODWLYH FRP PDQGV 3 WKH HPXODWRQ PRGHV ZKLFK HQ
DEOH XVH ,48. 68 Td (Q)BT,52.4 80 0TdTB.T8 48 0 TdWTdB.T24 80 0TdTdR)TdD)



Available Commands

&200$1'	)81&7,21
&$/	6KRZ WKH WLPLQJ FDOLEUDWLRQ IDFWRU LQ VHFRQGV
&$/ F	6HW WKH WLPLQJ FDOLEUDWLRQ IDFWRU LQ VHFRQGV ZKHUH F PD\ EH WR DQG DGYDQFHV WKH WLPLQJ RXWSXWV
&+$11(/6(7	6KRZ WKH VHWWLQJ RI WKH VHOHFWHG FKDQQHO VHW
&+$11(/6(7 V	6HOHFW WKH FKDQQHO VHW HLWKHU $ IRU 1RUWK $PHULFD . IRU 1RUWK $PHULFD SOXV . RUHD RU , IRU ,QGLD
&7,0(	6KRZ WKH VWDWXV RI WKH FRQWLQXRXV RQFH SHU VHFRQG WLPH RI GD\ RXWSXW
&7,0(H	(QDEOH RU GLVDEOH WKH FRQWLQXRXV RQFH SHU VHFRQG WLPH RI GD\ RXWSXW ZKHUH H PD\ EH 21 RU 2))
'6767$57	6KRZ WKH VHWWLQJ IRU WKH VWDUW GDWH RI WKH 'D\OLJKW 6DYLQJV 7LPH WUDQVLWLRQ
'6767$57 PVK	6HW WKH 'D\OLJKW 6DYLQJV 7LPH VWDUW GDWH ZKHUH P LV PRQWK V LV 6XQGD\ RI PRQWK / IRU st nd rd th RU /DVW K LV WKH KRXU RI WKH WUDQVLWLRQ ZKHUH PLGQLJKW '6767$57 ZLOO GLVDEOH 'D\OLJKW 6DYLQJV 7LPH
'676723	6KRZ WKH VHWWLQJ IRU WKH VWRS GDWH RI WKH 'D\OLJKW 6DYLQJV 7LPH WUDQVLWLRQ
'676723 PVK	6HW WKH 'D\OLJKW 6DYLQJV 7LPH VWRS GDWH ZKHUH P LV PRQWK V LV 6XQGD\ RI PRQWK / IRU st nd rd th RU /DVW K LV WKH KRXU RI WKH WUDQVLWLRQ ZKHUH PLGQLJKW '676723 ZLOO GLVDEOH 'D\OLJKW 6DYLQJV 7LPH
(08/	6KRZ WKH FRQWLQXRXV R1WL 65.25 480.09 Tm(&)Tj7.44 0 Td(7)Tj7.08 KOZWKH(7,L)7

6(77,1*6	6KRZ WKH FXUUHQW XVHU VHWWLQJV
6367$7	6KRZ WKH FXUUHQW VLJQDO SURFHVVRU SDUDPHWHUV
7,0(	6KRZ WKH FXUUHQW WLPH LQ QDWLYH 3U FLV &I WLPH RI GD\ IRUPDW
702'(	6KRZ WKH WLPH PRGH
702'(P	6HW WKH WLPH PRGH ZKHUH P PD\ EH *36 87& /2&$/ RU /2&$/0$1
83/2$'	,QLWLDOLVHV WKH)/$6+ XS0RDG SURFHVV
9(5	6KRZ WKH ILUPZDUH DQG KDUGZDUH YHUVLRQV

e alled Command e s lp lon s

CAL

7KLV FRPPDQG DOORZV WKH XVHU WR TXHU\ DQG VHW WKH YDOXH RI D FDOLEUDWLRQ RIIVHW WKDW WKH 3U FLV &I FDQ PDNH WR WKH 3U FLV &I WLPLQJ RXWSXWV ,W FDQ EH XVHIXO IRU FRPSHQVDWLQJ YDULRXV GHOD\V SUHVHQW LQ D V\VWHP 7KH XQLWV IRU WKH RIIVHW DUH VHFRQGV 7KH DOORZDEOH UDQJH LV VHFRQGV WR VHFRQGV ZKHUH D SRVLWLYH FDOLEUDWLRQ RIIVHW PHDQV WKDW WKH 3U FLV &I WLPLQJ RXWSXWV ZLOO EH DGYDQFHG LQ WLPH 7KH 3U FLV &I SHUIRUPV WKLV DGMXVWPHQW ZLWK D UHVROXWLRQ RI DSSUR[LPDWHO\ QDQRVHFRQGV 7KH H[DPSOH UHVSRQVH LQGLFDWHV WKDW WKH RXWSXWV DUH FXUUHQWO\ UHWDUGHG E\ PLFURVHFRQGV UHODWLYH WR 87& DV UHFHLYHG IURP WKH & ' 0$ EDVH VWDWLRQ

,Q XUEDQ DUHDV GLVWDQFHV WR EDVH VWDWLRQV VKRXOG QRUPDOO\ EH 0HVV WKDQ WZR PLOHV ,W FRXOG PDNH VHQVH WR VHW WKH FDOLEUDWLRQ RIIVHW WR SHUKDSV PLFURVHFRQGV KDOI RI WKH DSSUR[LPDWH 0LJKW VSHHG WUDQVLW WLPH RYHU WZR PLOHV WR LPSURYH WKH DEVROXWH DFFXUDF\ RI WKH 3U FLV &I ,I \RX KDYH VRPH ZD\ RI NQRZLQJ KRZ IDU WKH FORVHVW EDVH VWDWLRQ LV IURP \RXU VLWH \RX FRXOG PDNH D PRUH HGXFDWHG DGMXVWPHQW XVLQJ WKH DSSUR[LPDWH SURSDJDWLRQ GHOD\ RI RQH QDQRVHFRQG SHU IRRW RU QDQRVHFRQGV SHU PHWHU DQG WKH &$/ FRPPDQG 6HW YDOXH LV UHWDLQHG LQ QRQ YRODWLOH) /$6+ PHPRU\

Usage:

4XHU\	`CAL C > L↵>`
3U FLV &I UHVSRQVH	`-.000 345 C > L↵>`
6HW	`CAL .000 5 C > L↵>`
3U FLV &I UHVSRQVH	`K C > L↵>`

Factory Default Setting:

C ANN L↵

7KLV FRPPDQG DOORZV WKH XVHU WR VHW WKH IUHTXHQF\ FKDQQHOV WKDW WKH VLJQDO SURFHVVRU VHDUFK (F[FOXGHG FKDQQHOV DUH QRW VHDUFKHG DW DOO DQG DUH XVHIXO LQ DYRLGLQJ LQWHUIHUHQFH IURP NQRZQ VRXUFHV RU LQ VSHHGLQJ XS WKH VHDUFK SURFHVV

FHLYH WKH UHVSRQVH ¶(5525 &5! /)!· DQG DUH LJQRUHG ,I &7,0(LV 21 LWV RXW SXW WDNHV SULRULW\ RYHU WKHVH HYHQW WLPHWDJV ,W LV UHFRPPHQGHG WKDW &7,0(EH WXUQHG 2)) GXULQJ HYHQW WLPHWDJJLQJ RSHUDWLRQ 5HIHU WR $SSHQGL[& ² 7HFKQLFDO 6SHFLILFDWLRQV IRU HYHQW WLPHWDJJLQJ LPSOHPHQWDWLRQ GHWDLOV

Usage:

4XHU\	v C > L▸>
3U FLV &I UHVSRQVH	▸▸ C > L▸>
6HW	v

' $& &RQWURO 2YHU 5DQJH	7KLV ELW LQGLFDWHV WKDW WKH H0HFWURQLF IUHTXHQF\ FRQWURO ' $& IRU WKH 7&;2 KDV UHDFKHG HLWKHU WKH KLJK RU 0RZ 0LPLW ZKL0H 0RFNHG WR WKH &'0$ VLJQD0 8Q0HVV WKH XQLW LV EHLQJ VXEMHFWHG WR RXW RI VSHFLILFDWLRQ HQYLURQPHQW0D FRQGLWLRQV WKLV ZRX0G LQGLFDWH WKDW WKH 7&;2 IUHTXHQF\ KDV GULIWHG QHDU WR WKH HQG RI 0LH UHJLRQ 7KLV VKRX0G QRUPD00\ RQ0\ RFFXU DIWHU DERXW WHQ \HDUV RI RSHUDWLRQ 7KH XQLW ZL00 FRQWLQXH WR IXQFWLRQ XQWL0 WKH 7&;2 IUH TXHQF\ ILQD00\ UHDFKHV RQH RI WKH DFWXD0 ' $& HQG SRLQWV 7KH XQLW VKRX0G EH UHWXUQHG WR WKH IDFWRU\ IRU 7&;2 UHS0DFHPHQW DW WKH FXVWRPHU·V FRQYHQLHQFH
1R 6LJQD0 7LPH 2XW	7KLV ELW LQGLFDWHV WKDW WKH XQLW KDV QRW EHHQ DE0H WR DFTXLUH D &'0$ VLJQD0 IRU RQH KRXU ZKL0H WKH 7LPH)LJXUH RI 0HULW KDV EHHQ WKH XQV\QFKURQL]HG FRQGLWLRQ 7KLV FRX0G EH GXH WR D YDULHW\ RI UHDVRQV ,I WKHUH DUH QR RWKHU IDX0WV WKDW FRX0G H[S0DLQ WKH LQDELOLW\ WR UHFHLYH D VLJQD0 WKHQ WKHUH FRX0G EH D EDVH VWDWLRQ RXWDJH RU DQWHQQD E0RFNDJH ,I WKH FRQGLWLRQ SHUVLVWV LQGHILQLWH0\ WKH XQLW PD\ QHHG WR EH UHWXUQHG WR WKH IDFWRU\ IRU UHSDLU
)3*$ &RQILJ)DX0W	7KLV ELW LQGLFDWHV WKDW WKH PLFURSURFHVVRU ZDV XQDE0H WR FRQILJXUH WKH)3*$ 7KLV ZRX0G EH D IDWD0 IDX0W DQG WKH XQLW VKRX0G EH UHWXUQHG WR WKH IDFWRU\ IRU UH SDLU
)/$6+ :ULWH)DX0W	7KLV ELW LQGLFDWHV WKDW WKH PLFURSURFHVVRU ZDV XQDE0H WR YHULI\ D ZULWH WR WKH)/$6+ QRQ YR0DWL0H SDUDPHWHU VWRUDJH DUHD 7KLV VKRX0G QRW HYHU RFFXU XQGHU QRU P D0 RSHUDWLRQ 7KLV IDX0W ZRX0G FDXVH HUUDWLF RSHUD WLRQ DW WKH QH[W SRZHU F\F0LQJ VLQH LPSRUWDQW SDUDPHWHUV FRX0G EH FRUUXSW 7KH XQLW VKRX0G EH UH WXUQHG WR WKH IDFWRU\ IRU UHSDLU
/RFD0 2VFL00DWRU 3//)DX0W	7KLV ELW LQGLFDWHV WKDW WKH /RFD0 2VFL00DWRU 3KDVH /RFNHG /RRS 3// V\QWKHVL]HU LV XQ0RFNHG 7KLV FRQGLWLRQ VKRX0G QRW QRUPD00\ RFFXU XQ0HVV WKH XQLW LV VXEMHFWHG WR RXW RI VSHFLILFDWLRQ HQYLURQPHQWD0 FRQGL WLRQV 2WKHUZLVH WKLV ZRX0G EH D IDWD0 IDX0W DQG WKH XQLW VKRX0G EH UHWXUQHG WR WKH IDFWRU\ IRU UHSDLU
/RFD0 2VFL00DWRU)DL0XUH	7KLV ELW LQGLFDWHV WKDW WKH /RFD0 2VFL00DWRU 3KDVH /RFNHG /RRS 3// V\QWKHVL]HU KDV IDL0HG 7KLV FRQ

GLWLRQ VKRX0G QRW QRUPD00\ RFFXU XQ0HVV WKH XQLW LV VXEMHFWHG WR RXW RI VSHFLILFDWLRQ HQYLURQPHQWD0 FRQGL WLRQV 7KLV LV D IDWD0 IDX0W DQG WKH XQLW VKRX0G EH UH WXUQHG WR WKH IDFWRU\ IRU UHSDLU

7KH H[DPS0H UHVSRQVH LQGLFDWHV WKDW WKHUH KDV EHHQ D SHULRG ZLWKRXW WUDFNLQJ D &'0$ VLJQD0 WKDW H[FHHGHG WKH WLPH RXW SHULRG WKDW WKHUH ZDV D)/$6+ : ULWH)DX0W DQG WKDW WKHUH LV D /RFD0 2VFL00DWRU 3// IDX0W

Usage:

4XHU\	A C > L▸>
3U FLV &I UHVSRQVH	0x00 A C > L▸>
6HW	1 $
3U FLV &I UHVSRQVH	1 $

Factory Default Setting: 1 $

L

7KLV TXHU\ RQ0\ FRPPDQG GLVS0D\V D PHQX RI WKH DYDL0DE0H VWDWXV DQG FRQWUR0 FRP PDQGV VXSSRUWHG E\ WKH 3U FLV &I D0RQJ ZLWK WKH V\QWD[RI WKHLU XVDJH

Usage:

4XHU\	L C > L▸>
3U FLV &I UHVSRQVH	)X00 PHQX RI DYDL0DE0H FRPPDQGV DQG V\QWD[LV GLV S0D\HG
6HW	1 $
3U FLV &I UHVSRQVH	1 $

Factory Default Setting: 1 $

L A

7KLV FRPPDQG D00RZV WKH XVHU WR VHW WKH FXUUHQW DQG IXWXUH 0HDS VHFRQGV 6HW YD0XH LV UHWDLQHG LQ QRQ YR0DWL0H)/$6+ PHPRU\ 7KH &'0$ PREL0H SKRQH V\VWHP GRHV SURYLGH D PHFKDQLVP IRU DXWRPDWLF 87& 0HDS VHFRQG LQVHUWLRQ +RZHYHU WKHUH DUH VRPH 0RFDWLRQV ZKHUH WKLV KDV QRW EHHQ LPS0HPHQWHG WR WKH SUHFLVLRQ QHHGHG IRU D VPRRWK 0HDS VHFRQG WUDQVLWLRQ 7KLV FRPPDQG RYHUULGHV WKH 87& 0HDS VHFRQG LQIRU PDWLRQ UHFHLYHG IURP WKH &'0$ EDVH VWDWLRQ ,Q VR GRLQJ \RXU 3U FLV &I &IKLVWDDRQ V 7& 0W S VHF G WUDQVLWLRQ 5KH 8KH

O

7KLV FRPPDQG DOORZV WKH XVHU WR TXHU\ DQG VHW WKH FXUUHQW VHULDO , 2 SRUW VHWWLQJV &KDQJHV WR WKH VHWWLQJV WDNH SODFH LPPHGLDWHO\ DQG DUH UHWDLQHG LQ QRQ YRODWLOH) / $6+ PHPRU\ <RX PXVW FKDQJH \RXU WHUPLQDO SURJUDP WR PDWFK WKHVH VHWWLQJV LQ RUGHU WR FRQWLQXH WR FRPPXQLFDWH ZLWK WKH 3U FLV &I 5HVWRULQJ WKH IDFWRU\ GHIDXOW VHWWLQJV PD\ EH QHFHVVDU\ VKRXOG \RX IRUJHW WKH FXUUHQW VHWWLQJV 6HH $SSHQGL[% ² ,QGLFDWRU 0RGH %XWWRQ IRU GH WDLOV RQ UHVWRULQJ WKH IDFWRU\ GHIDXOW VHWWLQJV 7KH EDXG UDWH QXPEHU RI GDWD ELWV SDULW\ DQG QXPEHU RI VWRS ELWV PD\ EH VHW

%DXG UDWH PD\ EH
1XPEHU RI GDWD ELWV PD\ EH RU
3DULW\ PD\ EH (HYHQ 2 RGG RU 1 QRQH
1XPEHU RI VWRS ELWV PD\ EH RU

Usage:

4XHU\	C > L>
3U FLV &I UHVSRQVH	9600,, , C > L>
6HW	9 00, , , C > L>
3U FLV &I UHVSRQVH	K C > L>

Factory Default Setting: 1

WI

7KLV FRPPDQG DOORZV WKH XVHU WR TXHU\ DQG VHW WKH FXUUHQW 336 RXWSXW SXOVHZLGWK 6HW YDOXH LV UHWDLQHG LQ QRQ YRODWLOH) / $6+ PHPRU\ 7KH YDOXH LV LQ XQLWV RI PLOLVHF RQGV DQG PD\ EH WR RU 173 7KH 173 VHWWLQJ FDXVHV WKH 336 SXOVHZLGWK WR EH DXWRPDWLFDOO\ VHW WR RQH ELW ZLGWK DW WKH FXUUHQW VHOHFWHG EDXG UDWH RI WKH VHULDO , 2 SRUW 7KLV LV IRU XVH ZLWK WKH 336 RQ ' & ' 173 UHIHUHQFH FORFN GULYHUV

Usage:

4XHU\	WI C > L>
3U FLV &I UHVSRQVH	C > L>
6HW	WI 500 C > L>
3U FLV &I UHVSRQVH	K C > L>

Factory Default Setting:

AC UI

7KLV FRPPDQG DOORZV WKH XVHU WR IRUFH DQRWKHU VLJQDO SURFHVVRU DFTXLVLWLRQ VHTXHQFH DQG LV JHQHUDOO\ RQO\ XVHG LQ WLJKWO\ HPEHGGHG V\VWHPV 7KLV ZLOO FDXVH WKH XQLW WR I\ ZKHO XQWLO LW UHDFTXLUHV D VLJQDO

Usage:

4XHU\	1 $
3U FLV &I UHVSRQVH	1 $
6HW	AC UI C > L>
3U FLV &I UHVSRQVH	K C > L>

Factory Default Setting: 1 $

7KLV VHW RQ\ FRPPDQG DOORZV WKH XVHU WR SHUIRUP D VRIWZDUH UHVHW RI WKH XQLW 9DOLG ZLWK 3UDHFLV &I) :

Usage:

4XHU\	I C > L>
3U FLV &I UHVSRQVH	Cal 0.000000000 C > L>
	C me >> C > L>
	m l C > L>
	ve >> C > L>
	5 600, , C > L>
	w C > L>
	m e U C C > L>
6HW	1 $
3U FLV &I UHVSRQVH	1 $

Factory Default Setting: 1 $

A

7KLV TXHU\ RQ\ FRPPDQG GLVS0D\V WKH FXUUHQW VWDWXV RI VH0HFWHG VLJQD0 SURFHVVRU SD UDPHWHUV 7KLV LV D IL[HG 0HQJWK PHVVDJH IRUPDWWHG DV VR

636 &+$1 312 $*& 9&'$& 615) (55 &5! /)!

: KHUH

636	LV WKH 6LJQD0 3URFHVVRU 6WDWH RQH RI $&4 $FTXLUQJ '(7 6LJQD0 'HWHFWHG /.* &RGH /RFNLQJ 7.* &DUULHU /RFNLQJ /.' /RFNHG
&+$1	LV WKH &'0$ IUHTXHQF\ FKDQQH0 EHLQJ XVHG)RU 1RUWK $PHULFDQ IUHTXHQFLHV WKH UHSRUWHG FKDQQH0 ZL00 EH 35,$ 35,% 6(&$ RU 6(&% 7KHVH VWDQG IRU 3ULPDU\ $ 3ULPDU\ % 6HFRQGDU\ $ RU 6HFRQGDU\ % FKDQQH0V)RU .RUHDQ IUHTXHQFLHV WKH UHSRUWHG FKDQQH0 ZL00 EH 35.$ 35.% 6(.$ RU 6(.% 7KHVH VWDQG IRU 3ULPDU\ $ 3ULPDU\ % 6HFRQGDU\ $ RU 6HFRQGDU\ % FKDQQH0V)RU ,QGLDQ IUHTXHQFLHV WKH UHSRUWHG FKDQQH0 ZL00 EH , , , , , , , RU , 7KHUH DUH PX0LS0H SUPDU\ DQG VHFRQGDU\ FKDQQH0V LQ WKH ,QGLDQ FKDQQH0VHW VR WKH FKDQQH0 QXPEHU LV EHLQJ XVHG
312	LV WKH EDVH VWDWLRQ 3VHXGR1RLVH 2IIVHW WR LQ XQLWV RI 3VHXGR1RLVH FRGH FKLSV
$*&	LV WKH $XWRPDWLF *DLQ &RQWUR0 '$& E\WH WR ZLWK 0DUJHU QXPEHUV LPS0\LQJ KLJKHU 5) JDLQ 7\SLFD0 UDQJH LV WR
9&'$&	LV WKH 7&;2 9R0DJH &RQWUR0 '$& ZRUG WR ZLWK 0DUJHU QXPEHUV LPS0\LQJ KLJKHU 7&;2 IUHTXHQF\ 7\SLFD0 UDQJH LV WR

61 5 LV WKH FDUULHU 6LJQDO WR 1RLVH 5DWLR WR PHDVXUHG LQ WKH 6\QF &KDQQHO V\PERO UDWH EDQGZLGWK 7\SLFDO UDQJH LV WR

) (55 LV WKH 6\QF &KDQQHO)UDPH (UURU 5DWH WR ZLWK D KLJKHU QXPEHU LPS\LQJ PRUH &\FOLFDO 5HGXQGDQF\ &KHFN IDLOXUHV ZKHQ SURFHVVLQJ WKH 6\QF &KDQQHO PHVVDJH IUDPHV +LJKHU QXPEHUV ZLOO FRUUHODWH ZLWK ORZHU 6LJQDO WR 1RLVH 5DWLRV

Usage:

4XHU\	A C > L▸>
3U FLV &I UHVRQVH	LK _ I 3 6 ▪495 6.9 0.000 C > L▸>
6HW	1 $
3U FLV &I UHVRQVH	1 $

Factory Default Setting: 1 $

IM

7KLV TXHU\ RQ\ FRPPDQG GLVS\D\V WKH FXUUHQW WLPH RI GD\ LQ WKH QDWLYH 3U FLV &I IRUPDW 6HH WKH &ORFN (PXODWLRQ 0RGHV 0 0 0 0 0 0 Q0 R

87& 7KH 87& VHWWLQJ ZLOO FDXVH WKH WLPH RI GD\ WR EH GLVSOD\HG DV 87& WLPH 87& WLPH LV *36 WLPH ZLWK WKH DGGLWLRQ RI 0HDS VHFRQGV /HDS VHFRQGV FDQ EH GHWHUPLQHG E\ WKH XQLW DXWRPDWLFDOO\ IURP GDWD FRQ WDLQHG LQ WKH &'0$ VLJQDO /HDS VHFRQGV FDQ DOVR EH GHWHUPLQHG PDQXDOO\ YLD WKH XVHU LQWHUIDFH UHIHU WR WKH /(3FRPPDQG

/2&$/ 7KH /2&$/ VHWWLQJ ZLOO FDXVH WKH WLPH RI GD\ WR EH GLVSOD\HG ZLWK WKH 0RFD WLPH]RQH RIIVHW WR 87& 7KH 0RFD WLPH]RQH RIIVHW DQG GD\OLJKW VDYLQJV WLPH WUDQVLWLRQ LV GHWHUPLQHG DXWRPDWLFDOO\ IURP GDWD FRQ WDLQHG LQ WKH &'0$ VLJQDO

/2&$/0$1 7KH /2&$/0$1 VHWWLQJ ZLOO FDXVH WKH WLPH RI GD\ WR EH GLVSOD\HG ZLWK WKH 0RFD WLPH]RQH RIIVHW WR 87& 7KH 0RFD WLPH]RQH RIIVHW LV GHWHUPLQHG PDQXDOO\ YLD WKH XVHU LQWHUIDFH UHIHU WR WKH /2 '6767$57 DQG '676723 FRPPDQGV

Usage:

4XHU\ C > L↵>
3U FLV &I UHVSRQVH C > L↵>
6HW L CAL C > L↵>
3U FLV &I UHVSRQVH K C > L↵>

Factory Defaul

V

7KLV TXHU\ RQ0\ FRPPDQG GLVS0D\V WKH ILUPZDUH DQG KDUGZDUH YHUVLRQV

Usage:

4XHU\ V . C > L▸>

3U FLV &I UHVSRQVH

ae◂ C◂ ▸W 60 0-000 -00 v .0 - Ja 5 00 6 4 39 ae◂ ▸◂ A 60 0-000 -000 v 0 C > L▸>

6HW 1 $

3U FLV &I UHVSRQVH 1 $

Factory Default Setting: 1 $

Clock m la lon Mode s

7KH 3U FLV &I HPXODWHV WKUHH LQGXV

Ime I e o Me I / Ime all y

7KH QDWLYH DQG HPX0DWHG WLPH RI GD\ PHVVDJHV VHQW E\ WKH 3U FLV &I FRQWDLQ D FKDUDF WHU WKDW LQGLFDWHV WKH 0HYH0 RI DFFXUDF\ WKDW VKRX0G EH LQF0XGHG LQ WKH LQWHUSUHWDWLRQ RI WKH WLPH RI GD\ FRQWDLQHG LQ WKH PHVVDJH ,Q VRPH FDVHV WKLV FKDUDFWHU LV UHIHUUHG WR DV WKH ¶7LPH)LJXUH RI 0HULW· 7)20 ZKL0H LQ RWKHUV LW LV UHIHUUHG WR DV WKH ¶7LPH 4XD0 LW\·

,Q D00 FDVHV WKH 3U FLV &I UHSRUWV WKLV YD0XH DV DFFXUDWH0\ DV SRVVLE0H HYHQ GXULQJ SHUL RGV RI &'0$ VLJQD0 RXWDJH ZKHUH WKH 3U FLV &I LV XQDE0H WR GLUHFW0\ PHDVXUH WKH UH0D WLRQVKLS RI LWV WLPLQJ RXWSXWV WR 87& 'XULQJ WKHVH &'0$ RXWDJH SHULRGV DVVXPLQJ WKDW WKH 3U FLV &I KDG EHHQ V\QFKURQL]HG SULRU WR WKH RXWDJH WKH 3U FLV &I H[WUDSR 0DWHV WKH H[SHFWHG GULIW RI WKH 3U FLV &I WLPLQJ VLJQD0V EDVHG RQ LWV NQRZ0HGJH RI WKH FKDUDFWHULVWLFV RI WKH LQWHUQD0 7HPSHUDWXUH &RPSHQVDWHG &U\VWD0 2VFL00DWRU 7&;2 7KH H[WUDSR0DWHG 7)20 LV EDVHG RQ D FRQVHUYDWLYH HVWLPDWH RI WKH SHUIRUPDQFH RI WKH 7&;2 DQG VKRX0G EH FRQVLGHUHG ¶ZRUVW FDVH· IRU D W\SLFD0 EHQLJQ DPELHQW WHPSHUDWXUH HQYLURQPHQW

'XH WR WKLV H[WUDSR0DWLRQ EHKDYLRU EULHI UHPRYD0 RI WKH DQWHQQD IURP D QRUPD00\ RSHU DWLQJ 3U FLV &I ZL00 QRW LQGXFH DQ LPPHGLDWH D0DUP FRQGLWLRQ ,I WKH DQWHQQD LV UH PRYHG IRU 0RQJ HQRXJK SHULRGV \RX VKRX0G VHH WKH 7)20 FKDUDFWHU FKDQJH WR LQGL FDWH D JUDGXD00\ GHWHULRUDWLQJ DFFXUDF\ RI WKH WLPLQJ RXWSXWV ,I WKH VLJQD0 0RVV FRQGL WLRQ SHUVLVWV 0RQJHU WKHQ WKH ILQD0 XQV\QFKURQL]HG VWDWH ZL00 HYHQWXD00\ EH UHDFKHG ,I WKH 3U FLV &I LV XQDE0H WR DFKLHYH UH V\QFKURQL]DWLRQ ZLWKLQ RQH KRXU DIWHU UHDFKLQJ WKLV VWDWH WKH UHG /('ZL00 L00XPLQDWH 4XHULHV XVLQJ WKH)/767$7 VHULD0 , 2 FRP PDQG ZL00 UHWXUQ ZLWK WKH DSSURSULDWH ELW VHW WR LQGLFDWH D 0RVV RI VLJQD0 WLPH RXW FRQGL WLRQ

1 RWHV

<RX VKRXOG GHWHUPLQH ZKLFK IHDWXUHV DUH DYDLODEOH IRU \RXU SODWIRUP WKDW SHUWDLQ WR VSHFLILF 173 UHIHUHQFH FORFN GULYHUV ,Q SDUWLFXODU XVH RI WKH 336 LQSXW WLPHWDJJLQJ FDSDELOLWLHV RI WKH 173 LV VRPHZKDW PHVV\ DQG YHU\ SODWIRUP GHSHQGHQW 6RPH SODW IRUPV VXSSRUW WKH 336 LQSXW WLPHWDJJLQJ FDSDELOLW\ QDWLYH\ RWKHUV UHTXLUH DGGLWLRQDO FRGH DQG D NHUQHO UH FRPSLOH <RX PXVW GHWHUPLQH ZKDW \RX QHHG IRU \RXU SODWIRUP

,I \RX RQ\ QHHG D IHZ PLOLVHFRQGV RI SUHFLVLRQ WKHQ DOO SODWIRUPV ZLOO VXSSRUW V\Q FKURQL]DWLRQ XVLQJ WKH VWDQGDUG 173 UHIHUHQFH FORFN GULYHUV ZKLFK PHUH\ WLPHWDJ WKH UHFHLSW RI D VSHFLILF RQ WLPH FKDUDFWHU LQ WKH FORFN·V WLPH RI GD\ PHVVDJH 7KLV LV WKH HDVLHVW SDWK WR VHWWLQJ XS DQ 173 VHUYHU DQG LV UHFRPPHQGHG IRU DOO EXW WKH PRVW GH PDQGLQJ DSSOLFDWLRQV 7KLV PRGH RI RSHUDWLRQ GRHV QRW PDNH XVH RI WKH WZR VSHFLDO VLJQDOV RQ WKH 3U FLV &I VHULDO , 2 FRQQHFWRU

' DWD &DUULHU ' HWHFW ' &' 7KH 3U FLV &I GULYHUV WKLV VLJQDO IURP LWV 336 RXWSXW H V 3 L F. H

T(L)Tj2.52 0 T(Q)Tj5.88 0 T(J)Tj5.16 0 T( )Tj5.88 0 T(L)Tj2.52 0 Td

3DOLVDGH 7KLV PHWKRG LV VLPSOHU WKDQ WKH 336 GULYHQ ' & ' PHWKRG DQG XVHV WKH &76 LQSXW HYHQW WLPHWDJJLQJ FDSDELOLW\ RI WKH 3U FLV &I 7KH SUH FLVLRQ DWWDLQDEOH LV FRPSDUDEOH WR WKH 336 GULYHQ ' & ' RXWSXW PHWKRG DQG LV XQGHU PLFURVHFRQGV 6LQFH WKLV 173 UHIHUHQFH FORFN GULYHU LV IDLU\ QHZ \RXU 173 GLVWULEXWLRQ PD\ QRW LQFOXGH LW ,I QRW \RX VKRXOG GRZQORDG DQ XS WR GDWH 173 GLVWULEXWLRQ DQG LQVWDOO LW 5HFRPPHQGHG IRU PRVW XVHUV GXH WR WKH UHODWLYH\ VLPSOH VHW XS DQG KLJK SUHFLVLRQ DWWDLQDEOH

336 7KLV LV PRUH FRPSOLFDWHG DQG ZLOO \LHOG D VHUYHU ZLWK SUHFLVLRQ 0HVV WKDQ PLFURVHFRQGV ,W XVHV WKH 336 GULYHQ ' & ' RXWSXW FDSDELOLW\ RI WKH 3U FLV &I <RX ZLOO KDYH WR GR PRUH LQ GHSWK UHVHDUFK DQG VWXG\ WR XQGHUVWDQG WKH LQWHUZRUNLQJ EHWZHHQ WKH 173 DQG WKH 8QL[OLNH NHUQHO ,W PD\ UHTXLUH 8QL[/LQX[NHUQHO PRGLILFDWLRQV WR VXS SRUW LWV RSHUDWLRQ <RX PD\ KDYH WR UH FRPSLOH 173 WR WDNH DGYDQ WDJH RI DQ\ NHUQHO PRGLILFDWLRQV \RX PDGH WR VXSSRUW 336 5HF RPPHQGHG RQO\ IRU H[SHULHQFHG 173 XVHUV ZKR L [illegible]

LVDGH 7K F

Ba tc N e p

%DVL

1RZ \RX QHHG WR PDNH VXUH WKDW WKH VHULDO , 2 SRUW SDUDPHWHUV RI WKH 3U FLV &I DUH FRPSDWLEOH ZLWK WKRVH H[SHFWHG E\ WKH 7UXH7L(0H)Tj4 . 8 0 Tc( )Tj2 . 88 01E

all ade N e p

6HWXS XVLQJ WKH 7ULPE0H 3D0LVDGH HPX0DWLRQ PRGH LV QRW PXFK PRUH FRPS0LFDWHG WKDQ EDVLF VHWXS LI

- <RX KDYH EHHQ DE0H WR VXFFHVVIX00\ FRPPXQLFDWH ZLWK WKH 3U FLV &I DQG NQRZ ZKLFK VHULD0 , 2 GHYLFH RQ \RXU KRVW FRPSXWHU \RX DUH XVLQJ
- <RX KDYH LQVWD00HG 173 YHUVLRQ RQ \RXU KRVW FRPSXWHU

7R FRPS0HWH WKH VHWXS WKHVH JHQHUD0 VWHSV ZL00 EH SHUIRUPHG 7KH H[DPS0H ZKLFK IR0 0RZV JLYHV WKH GHWDL0HG VWHS E\ VWHS LQVWUXFWLRQV

,VVXH WKH FRPPDQG WR WKH 3U FLV &I WR VHW LW WR HPX0DWH WKH 7ULPE0H 3D0LVDGH F0RFN W\SH 7KHQ PDNH VXUH WKDW WKH 3U FLV &I VHULD0 , 2 SRUW SDUDPHWHUV DUH FRPSDWLE0H ZLWK WKH 7ULPE0H 3D0LVDGH 173 UHIHUHQFH F0RFN GULYHU 5HIHU WR &KDSWHU ² 6HULD0 , 2 &RQWUR0 DQG 6WDWXV &RPPDQGV IRU GHWDL0HG LQIRUPDWLRQ RQ XVLQJ WKH VHULD0 , 2 SRUW ZLWK WKH 3U FLV &I

1RZ FUHDWH D V\PER0LF 0LQN LQ \RXU GHY GLUHFWRU\ ZKLFK SRLQWV WR WKH VHULD0 , 2 SRUW WKDW \RXU 3U FLV &I LV FRQQHFWHG WR 7KH V\PER0LF 0LQN VKRX0G EH FD00HG SD0LVDGH

1RZ HGLW WKH QWS FRQI IL0H VR WKDW 173 ZL00 XVH WKH 7ULPE0H 3D0LVDGH 173 UHI HUHQFH F0RFN GULYHU

XAM L 7KH IR00RZLQJ H[DPS0H ZL00 VHW XS 173 RQ D /LQX[V\VWHP)LUVW VWRS WKH SRZHU XS GHIDX0W FRQWLQXRXV RQFH SHU VHFRQG WLPH RI GD\ PHV VDJH RXWSXW E\ VHQGLQJ WKLV FRPPDQG IURP \RXU WHUPLQD0 SURJUDP WR WKH 3U FLV &I

me C > L>

7KH 3U FLV &I ZL00 UHVSRQG

K C > L>

1RZ VHQG WKLV FRPPDQG WR FKDQJH WKH WLPH RI GD\ PHVVDJH IRUPDW WR 7ULPE0H 3D0L VDGH HPX0DWLRQ

em l mble C > L>

7KH 3U FLV &I ZL00 UHVSRQG

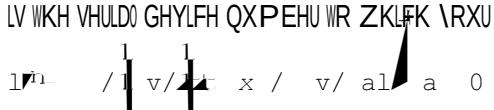
K C > L>

No e

6KXW GRZQ \RXU WHUPLQDO SURJUDP QRZ VR WKDW LW GHVV QRW LQWHUIHUH ZLWK WKH 173 UHIHUHQFH FORFN GULYHU 0DWHU

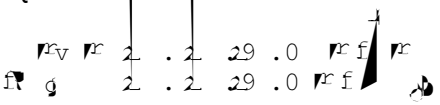
e e ymboll c L nk

1RZ \RX PXVW GHILQH D V\PER0LF 0LQN LQ \RXU GHY GLUHFWRU\ WKDW SRLQWV WR WKH VHULDO , 2 SRUW WR ZKLFK WKH 3U FLV &I LV FRQQHFWHG 7KH QDPH RI WKLV 0LQN LV XVHG E\ WKH 173 UHIHUHQFH FORFN GULYHU)RU /LQX[\RX PLJKW LVVXH WKLV VKH00 FRPPDQG ZKHUH [LV WKH VHULDO GHYLFH QXPEHU WR ZKLFK \RXU 3U FLV &I LV FRQQHFWHG



Con ! e N

1RZ \RX PXVW HGLW WKH QWS FRQI ILOH ZKLFK QWSG WKH 173 GDHPRQ 0RRNV IRU E\ GHIDXOW LQ WKH WKH HWF GLUHFWRU\ $GG WKHVH 0LQHV WR WKH QWS FRQI ILOH



7KH ILUVW 0LQH WH00V QWSG WR XVH WKH 3D0LVDGH UHIHUHQFH FORFN GULYHU DQG WR SUHIHU LW RYHU D00 RWKHU VHUYHUV 7KH WUDL0LQJ Q&LT&L) Tj/

WR GLVS0D\ WKH 173 SHHUV ZKLFK \RXU FRPSXWHU LV XVLQJ 2QH RI WKHP VKRX0G EH WKH 7UL PE0H 3D0LVDGH UHIHUHQFH F0RFN GULYHU ZKLFK \RX KDYH WXVW FRQILJXUHG <RX VKRX0G YHULI\ WKDW LV LV EHLQJ ¶UHDFKHG· <RX PD\ KDYH WR FRQILQXH LVVXLQJ WKH SHHUV FRPPDQG IRU D PLQXWH RU WZR EHIRUH \RX ZL00 VHH WKH ¶UHDFK· FRXQW LQFUHPHQW ,I \RX KDYH RWKHU SHHUV FRQILJXUHG YHULI\ WKDW WKH RIIVHW LQIRUPDWLRQ IRU WKH 3D0LVDGH SHHU DQG \RXU RWKHU SHHUV LV LQ DJUHHPHQW WR ZLWKLQ D IHZ PL00LVHFRQGV DVVXPLQJ WKDW WKH RWKHU SHHUV DUH V\QFKURQL]HG WR WKDW 0HYH0 RI DFFXUDF\

,W PD\ D0VR EH XVHIX0 WR VWDUW WKH 173 GDHPRQ LQ ¶GHXJ· PRGH QWSG ²G WR FRQILUP VXFFHVVIX0 FRQILJXUDWLRQ 5HIHU WR WKH 173 GRFXPHQWDWLRQ IRU GHWDL0HG XVDJH RI WKH GHXJ XWL0LWLHV

5H VWDUW QWSG WR KDYH LW EHJLQ XVLQJ WKH 3U FLV &I DV WKH SUHIHUUHG V\QFKURQL]DWLRQ SHHU
ZLWK 336

Cape

5

e pwI N on WIndow sN 4.0

7R FRQILJXUH \RXU : LQGRZV 17 FRPSXWHU WR XVH \RXU 3U FLV &I \RX PXVW KDYH VXFFHVVIX00\ FRPS0HWHG WKH %DVLF ,QVWD00DWLRQ SURFHGXUHV LQ &KDSWHU 7KLV PDQXD0 LV QRW D ¶+RZ 7R· RQ LQVWD00LQJ DQG XVLQJ 173 EDVLF DSSURDFKHV WR 173 FRQILJXUDWLRQ IRU RSHUDWLRQ ZLWK WKH 3U FLV &I ZL00 EH GHVFULEHG KHUH ,QVWD00DWLRQ PXVW EH SHUIRUPHG E\ D XVHU ZLWK DGPLQLVWUDWLYH SULYL0HGJHV RQ WKH V\VWHP ,I \RX KDYH QHYHU XVHG 173 WKHQ \RX VKRX0G VSHQG VRPH WLPH UHDGLQJ WKH RQ 0LQH GRFXPHQWV DW

KWWS ZZZ QWS RUJ

0DQ\ SURE0HPV PD\ D0VR EH VR0YHG E\ WKH KH0SIX0 SHRS0H ZKR SDUWLFLSDWH LQ WKH ,QWHU QHW QHZV JURXS GHYRWHG WR 173

QHZV \RXUBQHZVBVHUYHU FRPS SURWRFR0V WLPH QWS

No e

: LQGRZV 17 DQG 173 9HUVLRQ DUH UHTXLUHG IRU RSHUDWLRQ XVLQJ WKH 7ULPE0H 3D0LVDGH HPX0DWLRQ FDSDEL0LWLHV RI WKH 3U FLV &I 6LQFH WKLV 173 UHIHUHQFH F0RFN GULYHU LV IDLU0\ QHZ \RXU FXUUHQW 173 GLVWULEXWLRQ PD\ QRW LQF0XGH LW ,I QRW \RX VKRX0G GRZQ0RDG DQ XS WR GDWH 173 GLVWULEX WLRQ DQG LQVWD00 LW $ SUH FRPSL0HG ELQDU\ H[HFXWDE0H XVLQJ WKH : LQGRZV 17 ,QVWD006KLH0G LV D0VR IUHH0\ DYDL0DE0H IURP)LYH 7HQ 6RIWZDUH *URXS DW KWWS ZZZ ILYH WHQ VJ FRP

7KH 3U FLV &I LV FRPSDWLE0H ZLWK WKH RQ0\ 173 UHIHUHQFH F0RFN GULYHU WKDW LV FXUUHQW0\ DYDL0DE0H IRU 173 UXQQLQJ XQGHU : LQGRZV 17 7ULPE0H 3D0LVDGH 7KLV 173 UHIHU

HQFH F0RFN GULYHU DVVHUWV D 5HTXHVW 7R 6HQG 576 RQ WKH FRPSXWHU·V VHULD0 , 2 SRUW ZKLFK LV FRQQHFWHG YLD WKH VXSS0LHG FDE0H WR WKH &0HDU 7R 6HQG &76 LQSXW RI WKH 3U FLV &I VHULD0 , 2 SRUW 7KH 3U FLV &I WLPHWDJV WKH ULVLQJ HGJH RI WKLV &76 VLJQD0 IRUPDWV WKH WLPHWDJ DQG UHWXUQV LW LQ D ELQDU\ PHVVDJH WKDW LV FRPSDWLE0H ZLWK WKH 7ULPE0H 3D0LVDGH 173 UHIHUHQFH F0RFN GULYHU 7KH RIILFLD0 173 ZHE VLWH FRQWDLQV GRFXPHQWDWLRQ FRQFHUQLQJ WKH XVH RI WKH 7ULPE0H 3D0LVDGH ZLWK 173 6RPH RI WKLV VXEWHFW PDWWHU LV KH0SIX0 ZKHQ XVLQJ WKH 3U FLV &I LQ 7ULPE0H 3D0LVDGH HPX0DWLRQ PRGH

KWWS ZZZ HHFLV XGH0 HGX aPL00V QWS KWP0 GULYHUV GULYHU KWP0

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173 PXVW EH WKH RQ\ F0RFN V\QFKURQL]DWLRQ SURJUDP UXQQLQJ RQ WKH V\VWHP 2WKHU XWL0LWLHV IRU F0RFN V\QFKURQL]DWLRQ VXFK DV 7LPH6HUY ZKLFK LV DYDL0DE0H LQ WKH 0LFURVRIW :LQGRZV 17 5HVRXUFH .LW PXVW EH VWRSSHG GLVDE0HG RU XQLQVWD00HG

all ade N e p

6HWXS XVLQJ WKH 7ULPE0H 3D0LVDGH HPX0DWLRQ PRGH LV TXLWH VLPS0H LI

- <RX KDYH EHHQ DE0H WR VXFFHVVIX00\ FRPPXQLFDWH ZLWK WKH 3U FLV &I DQG NQRZ ZKLFK VHULD0 , 2 GHYLFH RQ \RXU KRVW FRPSXWHU \RX DUH XVLQJ
- <RX KDYH VXFFHVVIX00\ LQVWD00HG 173 YHUVLRQ ZLWK 7ULPE0H 3D0LVDGH UHIHUHQFH F0RFN GULYHU FDSDEL0LW\ RQ \RXU KRVW FRPSXWHU

7R FRPS0HWH WKH VHWXS WKHVH JHQHUD0 VWHSV ZL00 EH SHUIRUPHG 7KH H[DPS0H ZKLFK IR0 0RZV JLYHV WKH GHWDL0HG VWHS E\ VWHS LQVWUXFWLRQV

,VVXH WKH FRPPDQG WR WKH 3U FLV &I WR VHW LW WR HPX0DWH WKH 7ULPE0H 3D0LVDGH F0RFN W\SH 7KHQ PDNH VXUH WKDW WKH 3U FLV VHULD0 , 2 SRUW SDUDPHWHUV DUH FRPSDWLE0H ZLWK WKH 7ULPE0H 3D0LVDGH 173 UHIHUHQFH F0RFN GULYHU 5HIHU WR &KDSWHU ² 6HULD0 , 2 &RQWUR0 DQG 6WDWXV &RPPDQGV IRU GHWDL0HG LQIRUPDWLRQ RQ XVLQJ WKH VHULD0 , 2 SRUW ZLWK WKH 3U FLV &I

1RZ HGLW WKH QWS FRQI IL0H VR WKDW 173 ZL00 XVH WKH 7ULPE0H 3D0LVDGH 173 UHI HUHQFH F0RFN GULYHU ' HSHQGLQJ XSRQ KRZ \RX LQVWD00HG 173 VRPH RI WKH QHHGHG FRQILJXUDWLRQV P0\ KDYH D0UHDG\ EHHQ PDGH WR \RXU QWS FRQI

XAM L 7KH IR00RZLQJ H[DPS0H ZL00 VHW XS 173 RQ D : LQGRZV 17 V\VWHP)LUVW VWRS WKH SRZHU XS GHIDX0W RQFH SHU VHFRQG WLPH RI GD\ PHV

Impo an

1RZ WXUQ WKH WLPH RI GD\ PHVVDJH RXWSXW EDFN RII 7KH 3DOLVDGH UHIHU HQFH FORFN GULYHU XVHV WKH 576 DVVHUWLRQ HYHQW PHVVDJHV IRU V\QFKURQL]D WLRQ DQG WKH FRQWLQXRXV WLPH RI GD\ PHVVDJHV FDQ LQWHUIHUH ZLWK WKHVH.

me C > L>

7KH 3U FLV &I LV QRZ FRQILJXUHG IRU RSHUDWLRQ ZLWK WKH 7ULPEOH 3DOLVDGH 173 UHIHU HQFH FORFN GULYHU

No e

6KXW GRZQ \RXU WHUPLQDO SURJUDP QRZ VR WKDW LW GRHV QRW LQWHUIHUH ZLWK WKH 173 UHIHUHQFH FORFN GULYHU ODWHU

Con I e N

1RZ \RX PXVW HGLW WKH QWS FRQI ILOH ZKLFK QWSG H[H WKH 173 GDHPRQ ORRNV IRU E\ GH IDXOW LQ WKLV GLUHFWRU\ RQ \RXU V\VWHP SDUWLWLRQ ?ZLQQW?V\VWHP ?GULYHUV?HWF ,I \RXU 173 LQVWDOODWLRQ SODFHG WKLV ILOH LQ D GLIIHUHQW SODFH \RX PXVW ILQG LW DQG HGLW LW $GG WKHVH OLQHV WR WKH QWS FRQI ILOH

v 2 . 2 29 . x f
g 2 . 2 29 . x f

[LV WKH ¶XQLW LG· DQG LGHQWLILHV WKH VSHFLILF VHULDO , 2 SRUW WR ZKLFK WKH 3U FLV &I LV FRQQHFWHG <RX PXVW UHSODFH [ZLWK WKH &20 SRUW QXPEHU WKDW \RX DUH XVLQJ 7KH ILUVW OLQH WHOOV QWSG H[H WR XVH DQG WR SUHIHU WKH 3DOLVDGH UHIHUHQFH FORFN GULYHU RYHU WKH RWKHU VHUYHUV FRQILJXUHG LQ WKLV QWS FRQI ILOH ,W DOVR WHOOV QWSG H[H WR H[SHFW WR ILQG D 7ULPEOH 3DOLVDGH FRPSDWLEOH UHIHUHQFH FORFN FRQQHFWHG WR WKH VHULDO , 2 SRUW GHVLJ QDWHG DV &20[ZKHUH [PD\ EH RU 7KH VHFRQG OLQH WHOOV QWSG H[H WR UHSODFH WKH GHIDXOW UHIHUHQFH LG ILHOG IRU WKH 3DOLVDGH UHIHUHQFH FORFN GULYHU ZLWK WKH FKDUDFWHUV ¶& ' 0$· 7KLV UHIHUHQFH LG ILHOG LV WUDQVPLWWHG LQ WKH 173 VHUYHU UHSO\ SDFNHWV WKDW DUH VHQW LQ UHVSRQVH WR 173 FOLHQW UHTXHVW SDFNHWV ,W LGHQWLILHV WKH VRXUFH RI \RXU 173 VHUYHU·V UHIHUHQFH WLPH

5H VWDUW QWSG H[H WR KDYH LW EHJLQ XVLQJ WKH 3U FLV &I DV WKH SUHIHUUHG V\QFKURQL]DWLRQ SHHU %\ GHIDXOW WKH 173 LQVWDOODWLRQ SURJUDP LQVWDOOV QWSG H[H DV D VHUYLFH FDOOHG 1HW ZRUN 7LPH 3URWRFRO DQG VWDUWV LW <RX PXVW XVH WKH 6HUYLFHV XWLOLW\ LQ &RQWURO 3DQHO WR VWRS WKH 1HWZRUN 7LPH 3URWRFRO VHUYLFH DQG WKHQ UH VWDUW LW

8VH WKH 173 XWLOLW\ QWST H[H WR FKHFN WKDW QWSG H[H LV DEOH WR FRPPXQLFDWH ZLWK WKH 3U FLV &I %\ GHIDXOW LW LV LQVWDOOHG LQ WKH ?3URJUDP)LOHV?1HWZRUN 7LPH 3URWRFRO VXE

GLUHFWRU\ RI \RXU :LQGRZV 17 SDUWLWLRQ)URP D FRQVROH ZLQGRZ DIWHU LVVXLQJ WKH FRPPDQG

\RX ZLOO VHH WKH QWST FRPPDQG SURPSW

8

Setup Time on Windows

R FRQILJXUH \RXU :LQGRZV 17 RU 0DWHU FRPSXWHU WR XVH \RXU 3U FLV &I ZLWK 7LPH6HUY D XWLOLW\ FRQWDLQHG RQ WKH 0LFURVRIW :LQGRZV 17 6HUYHU 5HVRXUFH .LW &' 520 \RX PXVW KDYH VXFFHVVIX00\ FRPS0HWHG WKH %DVLF ,QVWD0 0DWLRQ SURFHGXUHV LQ &KDSWHU 7KLV PDQXD0 LV QRW D ¶+RZ 7R· RQ LQVWD00LQJ DQG XVLQJ 7LPH6HUY EDVLF DSSURDFKHV WR 7LPH6HUY FRQILJXUDWLRQ IRU RSHUDWLRQ ZLWK WKH 3U FLV &I ZL00 EH GHVFULEHG KHUH ,QVWD00DWLRQ PXVW EH SHUIRUPHG E\ D XVHU ZLWK DGPLQLVWUDWLYH SULYL0HGJHV RQ WKH V\VWHP ,I \RX KDYH QHYHU XVHG 7LPH6HUY WKHQ \RX VKRX0G VSHQG VRPH WLPH UHDGLQJ WKH RQ 0LQH GRFXPHQWV DW

KWWS ZZZ QLFHWLHV FRP WLPHVHUY KWP

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: LQGRZV 17 RU 0DWHU LV UHTXLUHG IRU RSHUDWLRQ XVLQJ 7LPH6HUY 7LPH 6HUY PXVW EH WKH RQ\ F0RFN V\QFKURQL]DWLRQ SURJUDP UXQQLQJ RQ WKH V\V WHP 7LPH6HUY ZL00 LQWHUIHUH ZLWK WKH RSHUDWLRQ RI F0RFN V\QFKURQL]DWLRQ YLD 173 VR 173 VKRX0G EH VWRSSHG RU GLVDE0HG ZKHQ 7LPH6HUY LV UXQ QLQJ

7KH 3U FLV &I FDQ HPX0DWH WZR RI WKH F0RFN W\SHV DFFHSWDE0H WR 7LPH6HUY 7UXH7LPH DQG 6HFWUD4I WD0 9 9R7 6T Tf 2.28 34 05 Tc 1.8 Tw 26 00 (GT)Tj 0 Tc 0 Tw (8).T 3.3 32 0 0 0 rg B/R10

Improve Up

,I \RX KDYH EHHQ DE0H WR VXFFHVVIX00\ FRPPXQLFDWH ZLWK WKH 3U FLV &I DQG NQRZ ZKLFK VHULD0 , 2 GHYLFH RQ \RXU KRVW FRPSXWHU \RX DUH XVLQJ DQG \RX KDYH VXFFHVVIX00\ LQ VWD00HG 7LPH6HUY VHWXS XVLQJ WKH 7UXH7LPH RU 6HFWUDFRP : : 9%)RUPDW F0RFN HPX0DWLRQ PRGHV LV TXLWH VLPS0H DQG FRQVLVWV RI WZR JHQHUD0 VWHSV 7KH H[DPS0H ZKLFK IR00RZV JLYHV WKH GHWDL0HG VWHS E\ VWHS LQVWUXFWLRQV

> ,VXH WKH FRPPDQG WR WKH 3U FLV &I WR VHW LW WR HPX0DWH WKH VH0HFWHG F0RFN W\SH 7KHQ PDNH VXUH WKDW WKH 3U FLV &I VHULD0 , 2 SRUW SDUDPHWHUV DUH FRPSDWLE0H ZLWK 7LPH6HUY 5HIHU WR &KDSWHU ² 6HULD0 , 2 &RQWUR0

)LQDOO\ IRU GH EXJ SXUSRVHV HQDEOH 0RJJLQJ RI LQIRUPDWLRQDO HYHQWV E\ VFUROOLQJ GRZQ WR WKH ¶/RJ · VHFWLRQ DQG UHPRYH WKH VHPL FRORQ IURP WKH HQWU\ ¶/RJ \HV· $GG D VHPL FRORQ WR WKH EHJLQQLQJ RI WKH ¶/RJ QR· OLQH 6DYH DQG FORVH WKH ILOH

,I 7LPH6HUY LV FXUUHQW\ UXQQLQJ VWRS LW XVLQJ 6HUYLFHV LQ WKH &RQWURO 3DQHO 0DNH 7LPH6HUY XSGDWH LWV VHWWLQJV IURP WKH QHZ WLPHVHUY LQL ILOH E\ LVVXLQJ WKLV FRPPDQG IURP D FRQVROH ZLQGRZ

5H VWDUW 7LPH6HUY XVLQJ 6HUYLFHV LQ WKH &RQWURO 3DQHO 8VH 6WDUW ! 3URJUDPV ! $GPLQLVWUDWLYH 7RROV ! (YHQW 9LHZHU WR YHULI\ WKDW 7LPH6HUY LV DEOH WR XSGDWH WKH V\VWHP FORFN E\ YLHZLQJ WKH 7LPH6HUY VRXUFHG HQWULHV LQ WKH DSSOLFDWLRQV ORJ $ QHZ HYHQW VKRXOG HQWHU WKH ORJ HYHU\ ILIWHHQ PLQXWHV ,W VKRXOG LQGLFDWH WKDW WKH WLPH KDV EHHQ VHW E\ DQ HQWU\ OLNH WKLV

7LPH VHW RII VHW ! VHFRQG

RU WKLV

7LPH VHW RII VHW VHFRQG

GHSHQGLQJ XSRQ KRZ IDU RII \RXU FRPSXWHU·V FORFN ZDV ZKHQ 7LPH6HUY FRUUHFWHG LW

Up ad'n e ' mwa e

HULRGLFD00\ (QG5XQ 7HFKQR0RJLHV ZL00 PDNH EXJ IL[HV DQG HQ

e g mIn e Up ade

&RQILJXUH \RXU WHUPLQDO SURJUDP DQG WKH 3U FLV &I WR FRPPXQLFDWH DW WKH GHVLUHG EDXG UDWH E\ XVLQJ WKH VHWWLQJV IDFLOLW\ IRU \RXU WHUPLQDO SURJUDP DQG WKH FRP PDQG IRU WKH 3U FLV &I 5HIHU WR &KDSWHU 6HULDO , 2 &RQWURO DQG 6WDWXV &RPPDQGV IRU GHWDLOV RQ XVLQJ WKH FRP PDQG

$IWHU HVWDEOLVKLQJ FRPPXQLFDWLRQV ZLWK WKH 3U FLV &I XVLQJ WKH GHVLUHG SRUW VHWWLQJV LVVXH WKH IROORZLQJ FRPPDQG WR LQLWLDWH WKH XSORDG

l a C > L>

$IWHU LVVXLQJ WKLV FRPPDQG \RX ZLOO VHH WKH 3U FLV &I UHVSRQG ZLWK WKLV PHVVDJH

Wa w l a K w C C.
C l w ll ab w l a.
CCC.

<RX ZLOO WKHQ VHH WKH 3U FLV &I VHQG WKH FKDUDFWHU ¶&· HYHU\ WKUHH VHFRQGV ZKLOH LW LV ZDLWLQJ IRU \RX WR EHJLQ XSORDGLQJ WKH LPDJH ILOH 6KRXOG \RX QHHG WR DERUW WKH XSORDG SURFHVV QRZ VHQG &75/ ; WR WKH 3U FLV &I ,I \RX DERUW DW WKLV WLPH \RXU FXUUHQW ILUPZDUH ZLOO UHPDLQ LQWDFW ,I \RX DERUW DIWHU WKH ILOH WUDQVIHU LV LQ SURJUHVV \RX ZLOO QRW UHWDLQ \RXU RULJLQDO ILUPZDUH <RX ZLOO QHHG WR UH XSORDG LW

2WKHUZLVH VWDUW WKH XSORDG XVLQJ WKH DSSURSULDWH PHWKRG IRU \RXU WHUPLQDO SURJUDP ' XULQJ WKH XSORDG \RXU WHUPLQDO SURJUDP ZLOO GLVSOD\ VRPH VRUW RI VWDWXV LQGLFDWLRQ ,I WKH XSORDG LV VXFFHVVIXO \RX ZLOO VHH WKH 3U FLV &I UH ERRW GLVSD\LQJ WKH ILUPZDUH YHUVLRQ LQIRUPDWLRQ ZKHQ LW GRHV 1RWH WKH ILUPZDUH YHUVLRQ LQIRUPDWLRQ DW WKLV WLPH DQG YHULI\ WKDW LW LV LQGHHG WKH ILUPZDUH WKDW \RX LQWHQGHG WR XSORDG WR WKH 3U FLV &I ,I LW LV \RX KDYH VXFFHVVIX00\ XSJUDGHG WKH ILUPZDUH LQ \RXU 3U FLV &I

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6KRXOG \RX KDYH GLIILFXOWLHV ZLWK WKH XSORDG GXH WR D FRUUXSW ILOH SRZHU IDLXUH GXULQJ XSORDG RU RWKHU DFFLGHQW GO QRW EH DODUPHG (YHQ WKRXJK \RX PD\ KDYH 0RVW WKH H[LVWLQJ DSSLFDWLRQ SURJUDP WKH 3U FLV &I ERRW 0RDGHU SURJUDP ZLOO UHPDLQ LQWDFW 2Q ERRW XS LW ZLOO FKHFN WR VHH LI D YDLG DSSLFDWLRQ SURJUDP LV LQ WKH) / $6+ PHPRU\ ,I WKHUH LV QRW LW ZLOO LPPHGLDWH\ JR LQWR WKH ¶ZDLWLQJ IRU GRZQORDG· PRGH VHQGLQJ WKH ¶&· FKDUDFWHU HYHU\ WKUHH VHFRQGV <RX PD\ WKHQ UH WU\ WKH XSORDG SURFHGXUH DIWHU \RX KDYH FRUUHFWHG WKH RULJLQDO SURE0HP

,W LV SRVVLE0H IRU WKH ERRW 0RDGHU SURJUDP WR EH IRR0HG E\ D FRUUXSWHG DSS0LFDWLRQ SUR JUDP WKDW KDV EHHQ SUHYLRXV0\ GRZQ0RDGHG LQWR) / $6+ ,Q WKLV FDVH LW ZLOO DWWHPSW WR VWDUW WKH DSS0LFDWLRQ SURJUDP * HQHUDO0\ WKLV ZLOO UHVXOW LQ D IDLXUH WKDW ZLOO IRUFH D

ZDWFKGRJ LQLWLDWHG UH ERRW 7KLV SURFHVV ZLOO EH UHSHDWHG LQGHILQLWHO\ XQOHVV \RX LQWHU YHQH

)RU ERRWORDGHU YHUVLRQV DQG HDUOLHU ,I WKH ERRW ORDG DSSOLFDWLRQ 0DXQFK VHTXHQFH DSSHDUV WR EH FDXJKW LQ D ORRS KROG GRZQ WKH ¶E· NH\ RQ \RXU NH\ERDUG ZKLOH WKH ERRW ORDGHU LV FRPLQJ XS 7KLV ZLOO FDXVH WKH ERRW ORDGHU WR LJQRUH WKH SUHVHQFH RI ZKDW LW WKLQNV LV D YDOLG DSSOLFDWLRQ SURJUDP LQ) / $6+ DQG IRUFH WKH ERRW ORDGHU WR LQLWLDWH WKH ; 0 2 ' (0 XSORDG VHTXHQFH : KHQ \RX VHH WKH FKDUDFWHU ¶&· EHLQJ GLVSOD\HG HYHU\ WKUHH VHFRQGV \RX PD\ LQLWLDWH WKH XSORDG RI D QHZ DSSOLFDWLRQ SURJUDP IL0H

)RU ERRWORDGHU YHUVLRQV DQG 0DWHU ,I WKH ERRW ORDG DSSOLFDWLRQ 0DXQFK VHTXHQFH DSSHDUV WR EH FDXJKW LQ D ORRS W\SH ´UHFRYHUµ ULJKW DIWHU WKH ERRWORDGHU YHUVLRQ VWULQJ LV GLVSOD\HG 7KLV ZLOO FDXVH WKH ERRW ORDGHU WR LJQRUH WKH SUHVHQFH RI ZKDW LW WKLQNV LV D YDOLG DSSOLFDWLRQ SURJUDP LQ) / $6+ DQG IRUFH WKH ERRW ORDGHU WR LQLWLDWH WKH ; 0 2 ' (0 XSORDG VHTXHQFH : KHQ \RX VHH WKH FKDUDFWHU ¶&· EHLQJ GLVSOD\HG HYHU\ WKUHH VHFRQGV \RX PD\ LQLWLDWH WKH XSORDG RI D QHZ DSSOLFDWLRQ SURJUDP IL0H

1 RWHV

Indica o Mode B on

KH ,QGLFDWRU 0RGH %XWWRQ LV 0RFDWHG RQ WKH VDPH HQG S0DWH RI WKH 3U FLV &I ZKHUH WKH DQWHQQD LQSXW MDFN DQG LQGLFDWRU / (' V DUH PRXQWHG ,W LV DFFHVVHG WKURXJK D VPD00 KR0H LQ WKH HQGS0DWH WR WKH 0HIW RI WKH / (' V $ SDSHU F0LS RU RWKHU VPD00 GLDPHWHU E0XQW WRR0 LV D JRRG ZD\ WR GHSUHVV WKH EXWWRQ

Ca Ion

' R QRW XVH DQ H[FHVVLYH DPRXQW RI IRUFH LQ GHSUHVVLQJ WKH ,QGLFDWRU

elec In e Indica o Mode

$IWHU SRZHU KDV EHHQ DSSOLHG SUHVVLQJ WKH ,QGLFDWRU 0RGH %XWWRQ ZLOO WRJJOH WKH ,QGL FDWRU 0RGH EHWZHHQ WKH 1RUPDO DQG 6LJQDO 4XDOLW\ PRGHV RI RSHUDWLRQ 2Q SRZHU XS WKH 3U FLV &I DOZD\V GHIDXOWV WR WKH 1RUPDO ,QGLFDWRU 0RGH ZKLFK PHDQV WKDW WKH FXUUHQW V\QFKURQL]DWLRQ VWDWXV LV LQGLFDWHG XVLQJ WKH JUHHQ / (' DV GHVFULEHG LQ &KDS WHU 3HUIRUPLQJ D 6LWH 6XUYH\

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/ (' LV 2Q 7KH JUHHQ / (' LV RQ FRQWLQXRXV\ XQWLO D &' 0$ VLJQDO LV GHWHFWHG

/ (' 3XOVHV 60RZ\ : KHQ WKH XQLW KDV GHWHFWHG D &' 0$ VLJQDO WKH JUHHQ / (' ZLOO EHJLQ WR IODVK YHU\ V0RZ\ DERXW D +] UDWH

/ (' 3XOVHV 5DSLG\ $V WKH XQLW 0RFNV RQWR WKH &' 0$ VLJQDO DQG EHJLQV WR GHFRGH WKH WLPLQJ GDWD WKH JUHHQ / (' ZLOO IODVK YHU\ UDSLG\ DERXW D +] UDWH XQWLO WKH GDWD LV IX00\ GHFRGHG

/ (' 3XOVHV DW 336 : KHQ WKH XQLW LV FRPSOHWHO\ 0RFNHG WR 87& WKH JUHHQ / (' ZLOO SXOVH DW SUHFLVH0\ D +] UDWH V\QFKURQL]HG WR 87& VHF RQGV ZLWK D VKRUW RQ GXUDWLRQ UH0DWLYH WR WKH RII GXUDWLRQ

,Q 1RUPDO ,QGLFDWRU 0RGH WKH UHG / (' LV RQ0\ L00XPLQDWHG EULHI0\ GXULQJ WKH SRZHU XS VHTXHQFH DQG WKHUHDIWHU ZKHQHYHU DQ\ IDX0W FRQGLWLRQ H[LVWV 7KH QDWXUH RI WKH IDX0W PD\ EH GHWHUPLQHG E\ XVLQJ WKH)/7(6)Tj5.52 0 Td(/)Tj 0 Td(D)Tj4.68 0 Td(Q)Tj5.88 0 Td(\)Tj4.8

ZKHQHY

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,Q JHQHUDO LW LV DGYLVDEOH WR UHWXUQ WKH 3U FLV &I WR WKH 1RUPDO ,QGLFDWRU 0RGH ZKHQ

1 RWHV

ec nlcal pecl lca lon s

5HFHLYHU
&H00X0DU 0RELO

- 7LPH RI ' D\ $6&,, VWULQJ YLD VHULD , 2 SRUW 6HFRQGV WKURXJK \HDUV LQ *36 87& RU /RFD 7LPH
- 5- WR ' %) FDEOH DVVHPE\ LV LQFOXGHG

,QGLFDWRUV

- $0DUP / (' UHG LQGLFDWRU WKDW LOOXPLQDWHV ZKHQ D VHULRXV IDXOW FRQGLWLRQ RFFXUV
- /RFN / (' JUHHQ LQGLFDWRU WKDW SXOVHV WR LQGLFDWH WKH FXUUHQW DFTXLVLWLRQ DQG 0RFN VWDWXV
- ,QGLFDWRU 0RGH %XWWRQ ² GXDO PRGH UHVWRUHV IDFWRU\ GHIDXOWV DQG VH0HFWV /RFN DQG $0DUP / (' PRGH

3RZHU RQ PP SKRQH WDFN

- 9 ' & # P$ $& ZDOO DGDSWHU LV LQFOXGHG

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- &DVH µ/ [µ : [µ+
- $QWHQQD µ/ [µ GLD

: HLJKW 0E J

(QYLURQPHQWDO

- 7HPSHUDWXUH *WR *&
- +XPLGLW\ WR QRQ FRQGHQVLQJ