

VDU TOOLKIT V1.0

				* =	§E800
				JMP	LE9F6
E800	4C	F6	E9		
E803	53				S
E804	45	74			E t
E806	52				R
E807	45	53			E S
E809	45	74			E t
E80B	49	4E			I N
E80D	53				S
E80E	45	74			E t
E810	44				D
E811	52				R
E812	41	77			A w
E814	55	4E			U N
E816	44				D
E817	52				R
E818	41	77			A w
E81A	49	4E			I N
E81C	44				D
E81D	52				R
E81E	41	77			A w
E820	54				T
E821	45	53			E S
E823	74				t
E824	4D	4F	56		M O V
E827	65	43			e C
E829	4C	73	48		L s H
E82C	4F				O
E82D	4D	65	55		M e U
E830	70	44			p D
E832	4F				O
E833	57				W
E834	6E	4C	45		n L E
E837	46	74			F t
E839	52				R
E83A	49	47			I G
E83C	48				H
E83D	74				t
E83E	57				W
E83F	49	4E			I N
E841	44				D
E842	4F				O
E843	77				w
E844	43				C
E845	55	52			U R
E847	73				s
E848	57				W
E849	49	44			I D
E84B	54				T
E84C	68				h
E84D	53				S
E84E	50	73			P s
E850	53				S
E851	42				B
E852	73				s
E853	4C	75	52		L u
E856	56	73			V s
E858	53				S
E859	59	73	52		Y s
E85C	45	4E			E N
E85E	55	4D			U M
E860	42				B
E861	45	72			E r
E863				BRK	
E864	FF				
E865	FF				
E866	FF				
E867	FF				
E868	FF				
E869	FF				

VDU Toolkit (PTL)

				* =	§E800
				JMP	LECDE
E800	4C	DE	EC		
E803	53				S
E804	45	74			E t
E806	52				R
E807	45	53			E S
E809	45	74			E t
E80B	49	4E			I N
E80D	53				S
E80E	45	74			E t
E810	44				D
E811	52				R
E812	41	77			A w
E814	55	4E			U N
E816	44				D
E817	52				R
E818	41	77			A w
E81A	49	4E			I N
E81C	44				D
E81D	52				R
E81E	41	77			A w
E820	4D	4F	56		M O V
E823	65	54			e T
E825	45	53			E S
E827	74				t
E828	43				C
E829	4C	67	43		L g C
E82C	4C	73	48		L s H
E82F	4F				O
E830	4D	65	4C		M e L
E833	45	46			E F
E835	74				t
E836	52				R
E837	49	47			I G
E839	48				H
E83A	74				t
E83B	44				D
E83C	4F				O
E83D	57				W
E83E	6E	55	70		n U p
E841	52				R
E842	56	73			V s
E844	53				S
E845	50	73			P s
E847	53				S
E848	42				B
E849	73				s
E84A	44				D
E84B	4C	49	6E		L I n
E84E	44				D
E84F	53				S
E850	43				C
E851	72				r
E852	50	55			P U
E854	53				S
E855	68				h
E856	50	4F			P O
E858	70	53			p S
E85A	57				W
E85B	41	70			A p
E85D	48				H
E85E	45	49			E I
E860	47				G
E861	48				H
E862	74				t
E863	43				C
E864	55	52			U R
E866	73				s
E867	53				S
E868	49	5A			I Z

VDU TOOLKIT V1.0

E86A	FF		
E86B	FF		
E86C	FF		
E86D	FF		
E86E	FF		
E86F	FF		
E870	A8	TAY	
E871	E9 AC	SBC	#\$AC
E873	E9 A0	SBC	#\$A0
E875	E9 B0	SBC	#\$B0
E877	E9 B4	SBC	#\$B4
E879	E9 A4	SBC	#\$A4
E87B	E9 BC	SBC	#\$BC
E87D	E9 B8	SBC	#\$B8
E87F	E9 9	SBC	#\$09
E881	EA	NOP	
E882	C7	???	
E883	EF	???	
E884	CC EF D1	CPY	#\$D1EF
E887	EF	???	
E888	DB	???	
E889	EF	???	
E88A	D6 EF	DEC	#\$EF,X
E88C	9F	???	
E88D	E8	INX	
E88E	0E EA AD	ASL	#\$ADEA
E891	EA	NOP	
E892	DA	???	
E893	EA	NOP	
E894	DE EA E2	DEC	#\$E2EA,X
E897	EA	NOP	
E898	4	???	
E899	EB	???	
E89A	F0 EF	BEQ	LE88B
E89C	86 EB	STX	#\$EB
E89E	FF	???	
E89F	FF	???	
E8A0	20 E1 EF	JSR	LEFE1
E8A3	8A	TXA	
E8A4	48	PHA	
E8A5	20 E9 D5	JSR	#\$D5E9
E8A8	18	CLC	
E8A9	E0 19	CPX	#\$19
E8AB	90 6	BCC	LE8B3
E8AD	68	LE8AD PLA	
E8AE	A2 35	LDX	#\$35
E8B0	4C 24 C3	JMP	#\$C324
E8B3	E4 23	LE8B3 CPX	#\$23
E8B5	F0 2	BEQ	LE8B9
E8B7	86 23	STX	#\$23
E8B9	A5 33	LE8B9 LDA	#\$33
E8BB	30 F0	BMI	LE8AD
E8BD	C5 23	CMP	#\$23
E8BF	F0 EC	BEQ	LE8AD
E8C1	B0 EA	BCS	LE8AD
E8C3	85 22	LE8C3 STA	#\$22
E8C5	98	TYA	
E8C6	48	PHA	
E8C7	A9	LDA	#\$00
E8C9	48	PHA	
E8CA	A9 72	LDA	#\$72
E8CC	48	PHA	
E8CD	A9	LDA	#\$00
E8CF	A4 23	LDY	#\$23
E8D1	20 A7 EA	JSR	LEAA7
E8D4	AD 2 1	LDA	#\$0102
E8D7	F0 1	BEQ	LE8DA
E8D9	48	PHA	
E8DA	AD 1 01	LE8DA LDA	#\$0101
E8DD	48	PHA	

VDU Toolkit (PTL)

E86A	65 4C	e L
E86C	75 53	u S
E86E	59 73 57	Y s W
E871	49 44	I D
E873	54	T
E874	68	h
E875	41 52	A R
E877	63	c
E878	55 4E	U N
E87A	41 52	A R
E87C	63	c
E87D	54	T
E87E	49 4C	I L
E880	74	t
E881	4F	O
E882	46 66	F f
E884	53	S
E885	74	t
E886	46 4C	F L
E888	41 53	A S
E88A	68	h
E88B	43	C
E88C	48	H
E88D	41 72	A r
E88F	4D 4F 44	M O D
E892	65 49	e I
E894	4E 63 52	N c R
E897	45 76	E v
E899	50 41	P A
E89B	47	G
E89C	65	e
E89E	31 E9	
E8A0	34 E9	
E8A2	37 E9	
E8A4	3A E9	
E8A6	3D E9	
E8A8	40 E9	
E8AA	43 E9	
E8AC	7A E9	
E8AE	EE E8	
E8B0	F1 E8	
E8B2	F4 E8	
E8B4	F7 E8	
E8B6	FA E8	
E8B8	FD E8 6	
E8BC	D6 E9	
E8BE	9 E9	
E8C0	0C E9	
E8C2	0F E9	
E8C4	12 E9	
E8C6	15 E9	
E8C8	18 E9	
E8CA	1B E9	
E8CC	D9 EA	
E8CE	5E EA	
E8D0	3 EA	
E8D2	C3 E9	
E8D4	E4 E9	
E8D6	4D EB	
E8D8	78 EC	
E8DA	7B EC	
E8DC	2E EC	LE8DC
E8DE	AB E9	
E8E0	B3 E9	

VDU TOOLKIT V1.0

E8DE	A9	3B	LDA	#\$3B
E8E0	48		PHA	
E8E1	A9		LDA	#\$00
E8E3	A4	22	LDY	\$22
E8E5	20	A7 EA	JSR	LEAA7
E8E8	AD	2 1	LDA	\$0102
E8EB	F0	1	BEQ	LE8EE
E8ED	48		PHA	
E8EE	AD	1 01	LE8EE LDA	\$0101
E8F1	48		PHA	
E8F2	A9	5B	LDA	#\$5B
E8F4	48		PHA	
E8F5	A9	1B	LDA	#\$1B
E8F7	48		PHA	
E8F8	68		LE8F8 PLA	
E8F9	F0	6	BEQ	LE901
E8FB	20	EB FB	JSR	\$FBEB
E8FE	4C	F8 E8	JMP	LE8F8
E901	68		LE901 PLA	
E902	A8		TAY	
E903	68		PLA	
E904	AA		TAX	
E905	4C	E8 EF	JMP	LEFE8
E908	FF			
E909	20	E9 D5	LE909 JSR	\$D5E9
E90C	86	F4	STX	\$F4
E90E	18		CLC	
E90F	60		RTS	
E910	18		LE910 CLC	
E911	C4	22	CPY	\$22
E913	B0	6	BCS	LE91B
E915	A6	F2	LE915 LDX	\$F2
E917	9A		TXS	
E918	4C	20 EA	JMP	LEA20
E91B	18		LE91B CLC	
E91C	C4	23	CPY	\$23
E91E	F0	2	BEQ	LE922
E920	B0	F3	BCS	LE915
E922	4C	A7 EA	LE922 JMP	LEAA7
E925	FF			
E926	8D	21 E6	LE926 STA	\$E621
E929	A2		LDX	#\$00
E92B	8E	91 BF	STX	\$BF91
E92E	8E	91 BF	STX	\$BF91
E931	CA		DEX	
E932	8E	92 BF	STX	\$BF92
E935	AE	91 BF	LDX	\$BF91
E938	AE	91 BF	LDX	\$BF91
E93B	D0	0D	BNE	LE94A
E93D	A2	6	LDX	#\$06
E93F	BD	4D E9	LE93F LDA	\$E94D,X
E942	95	EB	STA	\$EB,X
E944	CA		DEX	
E945	10	F8	BPL	LE93F
E947	4C	BC EE	JMP	LEEBBC
E94A	4C	B2 EE	LE94A JMP	LEEB2
E94D	4C	54 E9	JMP	LE954
E950			BRK	
E951	4C	58 E9	JMP	LE958
E954	C9	23	LE954 CMP	#\$23
E956	F0	0A	BEQ	LE962
E958	C9	20	LE958 CMP	#\$20
E95A	D0	3	BNE	LE95F
E95C	4C	E2 0	JMP	\$00E2
E95F	4C	A8	LE95F JMP	\$A800
E962	4C	2A EB	LE962 JMP	LEB2A
E965	48		LE965 PHA	
E966	A5	F7	LDA	\$F7
E968	AA		TAX	
E969	A5	EE	LDA	\$EE

VDU Toolkit (PTL)

E8E2	BB	E9		
E8E4	C1	EB		
E8E6	44	EA		
E8E8	4A	EC		
E8EA	23	E9		
E8EC	26	E9		
E8EE			BRK	
E8EF	A9	6	LDA	#\$06
E8F1	2C	A9 0C	BIT	\$0CA9
E8F4	2C	A9 1	BIT	\$01A9
E8F7	2C	A9 8	BIT	\$08A9
E8FA	2C	A9 9	BIT	\$09A9
E8FD	2C	A9 0A	BIT	\$0AA9
E900	2C	A9 0E	BIT	\$0EA9
E903	2C	A9 0F	BIT	\$0FA9
E906	2C	A9 1A	BIT	\$1AA9
E909	2C	A9 A0	BIT	\$A0A9
E90C	2C	A9 A1	BIT	\$A1A9
E90F	2C	A9 B0	BIT	\$B0A9
E912	2C	A9 B1	BIT	\$B1A9
E915	2C	A9 C0	BIT	\$C0A9
E918	2C	A9 C1	BIT	\$C1A9
E91B	2C	A9 C2	BIT	\$C2A9
E91E	2C	A9 2	BIT	\$02A9
E921	4C	2F F8	LE921 JMP	\$F82F
E924	A2	71	LDX	#\$71
E926	2C	A2 78	BIT	\$78A2
E929	A9	1B	LDA	#\$1B
E92B	20	21 E9	JSR	LE921
E92E	8A		TXA	
E92F	4C	21 E9	JMP	LE921
E932	A9	1C	LDA	#\$1C
E934	2C	A9 1D	BIT	\$1DA9
E937	2C	A9 15	BIT	\$15A9
E93A	2C	A9 1E	BIT	\$1EA9
E93D	2C	A9 19	BIT	\$19A9
E940	2C	A9 17	BIT	\$17A9
E943	2C	A9 1F	BIT	\$1FA9
E946	8D	50 1	LE946 STA	\$0150
E949	20	F4 E9	JSR	LE9F4
E94C	20	E9 D5	JSR	\$D5E9
E94F	8E	53 1	STX	\$0153
E952	A5	33	LDA	\$33
E954	8D	51 1	STA	\$0151
E957	18		CLC	
E958	A5	34	LDA	\$34
E95A	C9	2	CMP	#\$02
E95C	90	5	BCC	LE963
E95E	A2	35	LE95E LDX	#\$35
E960	4C	24 C3	JMP	\$C324
E963	8D	52 1	LE963 STA	\$0152
E966	20	FB E9	JSR	LE9FB
E969	A9	4	LDA	#\$04
E96B	85	14	STA	\$14
E96D	A2		LE96D LDX	#\$00
E96F	BD	50 1	LE96F LDA	\$0150,X
E972	20	21 E9	JSR	LE921
E975	E8		INX	
E976	E4	14	CPX	\$14
E978	D0	F5	BNE	LE96F
E97A	60		RTS	
E97B	A9	18	LDA	#\$18
E97D	20	46 E9	JSR	LE946
E980	AD	BE	LE980 LDA	\$BE00
E983	2A		ROL	A
E984	85	EE	STA	\$EE
E986	24	EE	BIT	\$EE
E988	50	F6	BVC	LE980

VDU TOOLKIT V1.0

E96B	C9	28		CMP	#\$28
E96D	B0	4		BCS	LE973
E96F	8A			TXA	
E970	E9	1		SBC	#\$01
E972	AA			TAX	
E973	68		LE973	PLA	
E974	20	EB	FB	LE974	JSR \$FBEB
E977	CA			DEX	
E978	F0	5		BEQ	LE97F
E97A	30	3		BMI	LE97F
E97C	4C	74	E9	JMP	LE974
E97F	60		LE97F	RTS	
E980	FF				
E981	FF				
E982	FF				
E983	FF				
E984	FF				
E985	FF				
E986	FF				
E987	FF				
E988	FF				
E989	FF				
E98A	FF				
E98B	FF				
E98C	85	F2	LE98C	STA	\$F2
E98E	20	C3	E9	JSR	LE9C3
E991	AD		BE	LE991	LDA \$BE00
E994	2A			ROL	A
E995	85	EE		STA	\$EE
E997	24	EE		BIT	\$EE
E999	50	F6		BVC	LE991
E99B	6A			ROR	A
E99C	29	0F		AND	#\$0F
E99E	85	EE		STA	\$EE
E9A0	60			RTS	
E9A1	A9	15		LDA	#\$15
E9A3	10	1C		BPL	LE9C1
E9A5	A9	17		LDA	#\$17
E9A7	10	18		BPL	LE9C1
E9A9	A9	1C		LDA	#\$1C
E9AB	10	14		BPL	LE9C1
E9AD	A9	1D		LDA	#\$1D
E9AF	10	10		BPL	LE9C1
E9B1	A9	1E		LDA	#\$1E
E9B3	10	0C		BPL	LE9C1
E9B5	A9	19		LDA	#\$19
E9B7	10	8		BPL	LE9C1
E9B9	A9	1F		LDA	#\$1F
E9BB	10	4		BPL	LE9C1
E9BD	A9	18		LDA	#\$18
E9BF	10	CB		BPL	LE98C
E9C1	85	F2	LE9C1	STA	\$F2
E9C3	20	E1	EF	LE9C3	JSR LEFE1
E9C6	8A			TXA	
E9C7	48			PHA	
E9C8	20	E9	D5	JSR	\$D5E9
E9CB	86	F5		STX	\$F5
E9CD	A5	33		LDA	\$33
E9CF	85	F3		STA	\$F3
E9D1	18			CLC	
E9D2	A5	34		LDA	\$34
E9D4	C9	2		CMP	#\$02
E9D6	90	6		BCC	LE9DE
E9D8	68			PLA	
E9D9	A2	35		LDX	#\$35
E9DB	4C	24	C3	JMP	\$C324
E9DE	85	F4	LE9DE	STA	\$F4
E9E0	A9			LDA	#\$00
E9E2	85	F6		STA	\$F6
E9E4	20	E8	EF	JSR	LEFE8

VDU Toolkit (PTL)

E98A	6A			ROR	A
E98B	29	0F		AND	#\$0F
E98D	85	EE		STA	\$EE
E98F	60			RTS	
E990	A9	30	LE990	LDA	#\$30
E992	2C	A9	31	BIT	\$31A9
E995	2C	A9	32	BIT	\$32A9
E998	8D	52	1	LE998	STA \$0152
E99B	A9	1B		LDA	#\$1B
E99D	8D	50	1	STA	\$0150
E9A0	A9	5B		LDA	#\$5B
E9A2	8D	51	1	STA	\$0151
E9A5	A9	4		LDA	#\$04
E9A7	85	14		STA	\$14
E9A9	4C	6D	E9	JMP	LE96D
E9AC	A9	62		LDA	#\$62
E9AE	8D	53	1	STA	\$0153
E9B1	4C	96	E9	JMP	LE996
E9B4	A9	62		LDA	#\$62
E9B6	8D	53	1	STA	\$0153
E9B9	4C	90	E9	JMP	LE990
E9BC	A9	62		LDA	#\$62
E9BE	8D	53	1	STA	\$0153
E9C1	4C	93	E9	JMP	LE993
E9C4	A9	75		LDA	#\$75
E9C6	8D	53	1	STA	\$0153
E9C9	A5	23		LDA	\$23
E9CB	F0	5		BEQ	LE9D2
E9CD	C6	23		DEC	\$23
E9CF	4C	90	E9	JMP	LE990
E9D2	E6	23	LE9D2	INC	\$23
E9D4	4C	93	E9	JMP	LE993
E9D7	A5	22		LDA	\$22
E9D9	F0	5		BEQ	LE9E0
E9DB	C6	22		DEC	\$22
E9DD	4C	4	E9	JMP	LE904
E9E0	E6	22	LE9E0	INC	\$22
E9E2	4C	1	E9	JMP	LE901
E9E5	20	E2		JSR	\$00E2
E9E8	20	29	CC	JSR	\$CC29
E9EB	20	F5	D5	JSR	\$D5F5
E9EE	20	FB	E9	JSR	LE9FB
E9F1	6C	33		JMP	(\$0033)
E9F4	E6	E9	LE9F4	INC	\$E9
E9F6	D0	2		BNE	LE9FA
E9F8	E6	EA		INC	\$EA
E9FA	60		LE9FA	RTS	
E9FB	A5	E9	LE9FB	LDA	\$E9
E9FD	D0	2		BNE	LEA01
E9FF	C6	EA		DEC	\$EA
EA01	C6	E9	LEA01	DEC	\$E9
EA03	60			RTS	
EA04	20	98	D5	JSR	\$D598
EA07	20	FB	E9	JSR	LE9FB
EA0A	8A			TXA	
EA0B	F0	5		BEQ	LEA12
EA0D	18			CLC	
EA0E	C9	6		CMP	#\$06
EA10	90	3		BCC	LEA15
EA12	4C	5E	E9	LEA12	JMP LE95E
EA15	85	F9	LEA15	STA	\$F9
EA17	C9	1		CMP	#\$01
EA19	F0	0E		BEQ	LEA29
EA1B	C9	2		CMP	#\$02
EA1D	F0	0D		BEQ	LEA2C
EA1F	C9	3		CMP	#\$03
EA21	F0	0C		BEQ	LEA2F
EA23	C9	4		CMP	#\$04
EA25	F0	0B		BEQ	LEA32
EA27	10	0C		BPL	LEA35

VDU TOOLKIT V1.0

E9E7	A2		LDX	#\$00		
E9E9	B5	F2	LE9E9	LDA	\$F2,X	
E9EB	20	EB	FB	JSR	\$FBEB	
E9EE	E8		INX			
E9EF	E0	5	CPX	#\$05		
E9F1	D0	F6	BNE	LE9E9		
E9F3	68		PLA			
E9F4	AA		TAX			
E9F5	60		LE9F5	RTS		
E9F6	2C		BE	LE9F6	BIT	\$BE00
E9F9	10	FA	BPL	LE9F5		
E9FB	A9		LDA	#\$00		
E9FD	85	22	STA	\$22		
E9FF	A9	18	LDA	#\$18		
EA01	85	23	STA	\$23		
EA03	A9	60	LDA	#\$60		
EA05	85	21	STA	\$21		
EA07	4C	7B	EE	JMP	LEE7B	
EA0A	A9	0C	LDA	#\$0C		
EA0C	4C	EB	FB	JMP	\$FBEB	
EA0F	20	E1	EF	JSR	LEFE1	
EA12	8A		TXA			
EA13	48		PHA			
EA14	BA		TSX			
EA15	86	F2	STX	\$F2		
EA17	20	9	E9	JSR	LE909	
EA1A	A5	33	LDA	\$33		
EA1C	C9	19	CMP	#\$19		
EA1E	90	6	BCC	LEA26		
EA20	68		LEA20	PLA		
EA21	A2	35	LDX	#\$35		
EA23	4C	24	C3	JMP	\$C324	
EA26	85	F5	LEA26	STA	\$F5	
EA28	A5	F7	LDA	\$F7		
EA2A	C9	2	CMP	#\$02		
EA2C	90	2A	BCC	LEA58		
EA2E	D0	7	BNE	LEA37		
EA30	A9	28	LDA	#\$28		
EA32	85	F6	STA	\$F6		
EA34	4C	5C	EA	JMP	LEA5C	
EA37	C9	3	LEA37	CMP	#\$03	
EA39	D0	7	BNE	LEA42		
EA3B	A9	1C	LDA	#\$1C		
EA3D	85	F6	STA	\$F6		
EA3F	4C	5C	EA	JMP	LEA5C	
EA42	C9	4	LEA42	CMP	#\$04	
EA44	D0	7	BNE	LEA4D		
EA46	A9	14	LDA	#\$14		
EA48	85	F6	STA	\$F6		
EA4A	4C	5C	EA	JMP	LEA5C	
EA4D	C9	5	LEA4D	CMP	#\$05	
EA4F	D0	CF	BNE	LEA20		
EA51	A9	10	LDA	#\$10		
EA53	85	F6	STA	\$F6		
EA55	4C	5C	EA	JMP	LEA5C	
EA58	A9	4F	LEA58	LDA	#\$4F	
EA5A	85	F6	STA	\$F6		
EA5C	18		LEA5C	CLC		
EA5D	A5	F4	LDA	\$F4		
EA5F	C5	F6	CMP	\$F6		
EA61	B0	BD	BCS	LEA20		
EA63	98		TYA			
EA64	48		PHA			
EA65	A9		LDA	#\$00		
EA67	48		PHA			
EA68	A9	63	LDA	#\$63		
EA6A	48		PHA			
EA6B	A9		LDA	#\$00		
EA6D	A4	F4	LDY	\$F4		
EA6F	20	A7	EA	JSR	LEAA7	

VDU Toolkit (PTL)

EA29	A9	51	LEA29	LDA	#\$51	
EA2B	2C	A9	29	BIT	\$29A9	
EA2E	2C	A9	1C	BIT	\$1CA9	
EA31	2C	A9	15	BIT	\$15A9	
EA34	2C	A9	11	BIT	\$11A9	
EA37	85	F2	STA	\$F2		
EA39	A9	77	LDA	#\$77		
EA3B	8D	53	1	STA	\$0153	
EA3E	8A		TXA			
EA3F	18		CLC			
EA40	69	30	ADC	#\$30		
EA42	4C	98	E9	JMP	LE998	
EA45	A9	61	LDA	#\$61		
EA47	8D	53	1	STA	\$0153	
EA4A	20	98	D5	JSR	\$D598	
EA4D	20	FB	E9	JSR	LE9FB	
EA50	8A		TXA			
EA51	30	BF	BMI	LEA12		
EA53	F0	7	BEQ	LEA5C		
EA55	C9	1	CMP	#\$01		
EA57	D0	B9	BNE	LEA12		
EA59	4C	93	E9	JMP	LE993	
EA5C	4C	90	E9	LEA5C	JMP	LE990
EA5F	A9	1B	LDA	#\$1B		
EA61	8D	50	1	STA	\$0150	
EA64	A9	5B	LDA	#\$5B		
EA66	8D	51	1	STA	\$0151	
EA69	20	F4	E9	JSR	LE9F4	
EA6C	20	E9	D5	JSR	\$D5E9	
EA6F	8E	5E	1	STX	\$015E	
EA72	18		CLC			
EA73	A5	33	LDA	\$33		
EA75	C9	19	CMP	#\$19		
EA77	90	3	BCC	LEA7C		
EA79	4C	5E	E9	LEA79	JMP	LE95E
EA7C	8D	5F	1	LEA7C	STA	\$015F
EA7F	C5	F8	CMP	\$F8		
EA81	B0	F6	BCS	LEA79		
EA83	A8		TAY			
EA84	A9		LDA	#\$00		
EA86	20	D4	EA	JSR	LEAD4	
EA89	A2	2	LDX	#\$02		
EA8B	86	14	STX	\$14		
EA8D	A0	1	LDY	#\$01		
EA8F	B9	1	LEA8F	LDA	\$0100,Y	
EA92	F0	9	BEQ	LEA9D		
EA94	9D	50	1	STA	\$0150,X	
EA97	E6	14	INC	\$14		
EA99	C8		INY			
EA9A	E8		INX			
EA9B	D0	F2	BNE	LEA8F		
EA9D	A9	3B	LEA9D	LDA	#\$3B	
EA9F	9D	50	1	STA	\$0150,X	
EAA2	E8		INX			
EAA3	E6	14	INC	\$14		
EAA5	8A		TXA			
EAA6	48		PHA			
EAA7	18		CLC			
EAA8	AD	5E	1	LDA	\$015E	
EAAB	C5	F7	CMP	\$F7		
EAAD	B0	CA	BCS	LEA79		
EAAF	A8		TAY			
EAB0	A9		LDA	#\$00		
EAB2	20	D4	EA	JSR	LEAD4	
EAB5	68		PLA			
EAB6	AA		TAX			
EAB7	A0	1	LDY	#\$01		
EAB9	B9	01	LEAB9	LDA	\$0100,Y	
EABC	F0	9	BEQ	LEAC7		
EABE	9D	50	1	STA	\$0150,X	

VDU TOOLKIT V1.0

EA72	AD	2	1	LDA	\$0102		
EA75	F0	1		BEQ	LEA78		
EA77	48			PHA			
EA78	AD	1	01	LEA78 LDA	\$0101		
EA7B	48			PHA			
EA7C	A9	3B		LDA	#\$3B		
EA7E	48			PHA			
EA7F	A9			LDA	#\$00		
EA81	A4	F5		LDY	\$F5		
EA83	20	10	E9	JSR	LE910		
EA86	AD	2	1	LDA	\$0102		
EA89	F0	1		BEQ	LEA8C		
EA8B	48			PHA			
EA8C	AD	1	01	LEA8C LDA	\$0101		
EA8F	48			PHA			
EA90	A9	5B		LDA	#\$5B		
EA92	48			PHA			
EA93	A9	1B		LDA	#\$1B		
EA95	48			PHA			
EA96	68			LEA96 PLA			
EA97	F0	6		BEQ	LEA9F		
EA99	20	EB	FB	JSR	\$FBEB		
EA9C	4C	96	EA	JMP	LEA96		
EA9F	68			LEA9F PLA			
EAA0	A8			TAY			
EAA1	68			PLA			
EAA2	AA			TAX			
EAA3	20	E8	EF	JSR	LEFE8		
EAA6	60			RTS			
EAA7	20	94	D1	LEAA7 JSR	\$D194		
EAAA	20	7B	DC	JSR	\$DC7B		
EAAD	60			RTS			
EAAE	20	98	D5	JSR	\$D598		
EAB1	20	E8	EF	JSR	LEFE8		
EAB4	8A			TXA			
EAB5	F0	5		BEQ	LEABC		
EAB7	18			CLC			
EAB8	C9	6		CMP	#\$06		
EABA	90	5		BCC	LEAC1		
EABC	A2	35		LEABC LDX	#\$35		
EABE	4C	24	C3	JMP	\$C324		
EAC1	85	F7		LEAC1 STA	\$F7		
EAC3	A9	1B		LDA	#\$1B		
EAC5	20	EB	FB	JSR	\$FBEB		
EAC8	A9	5B		LDA	#\$5B		
EACA	20	EB	FB	JSR	\$FBEB		
EACD	A5	F7		LDA	\$F7		
EACF	18			CLC			
EAD0	69	30		ADC	#\$30		
EAD2	20	EB	FB	JSR	\$FBEB		
EAD5	A9	77		LDA	#\$77		
EAD7	20	EB	FB	JSR	\$FBEB		
EADA	60			RTS			
EADB	A9	A0		LDA	#\$A0		
EADD	30	1E		BMI	LEAFD		
EADF	A9	A1		LDA	#\$A1		
EAE1	30	1A		BMI	LEAFD		
EAE3	A5	F9		LDA	\$F9		
EAE5	F0	1A		BEQ	LEB01		
EAE7	C6	F9		DEC	\$F9		
EAE9	A9	1B		LEAE9 LDA	#\$1B		
EAEB	20	EB	FB	JSR	\$FBEB		
EAEF	A9	5B		LDA	#\$5B		
EAF0	20	EB	FB	JSR	\$FBEB		
EAF3	A5	F9		LDA	\$F9		
EAF5	18			CLC			
EAF6	69	30		ADC	#\$30		
EAF8	20	EB	FB	JSR	\$FBEB		
EAFB	A9	75		LDA	#\$75		
EAFD	20	EB	FB	LEAFD JSR	\$FBEB		

VDU Toolkit (PTL)

EAC1	E6	14		INC	\$14		
EAC3	C8			INY			
EAC4	E8			INX			
EAC5	D0	F2		BNE	LEAB9		
EAC7	A9	63		LEAC7 LDA	#\$63		
EAC9	9D	50	01	LEAC9 STA	\$0150,X		
EACC	E6	14		INC	\$14		
EACE	20	6D	E9	JSR	LE96D		
EAD1	4C	FB	E9	JMP	LE9FB		
EAD4	20	94	D1	LEAD4 JSR	\$D194		
EAD7	4C	7B	DC	JMP	\$DC7B		
EADA	A9	1B		LDA	#\$1B		
EADC	8D	50	1	STA	\$0150		
EADF	A9	5B		LDA	#\$5B		
EAE1	8D	51	1	STA	\$0151		
EAE4	20	F4	E9	JSR	LE9F4		
EAE7	20	E9	D5	JSR	\$D5E9		
EAEA	18			CLC			
EAEB	E0	19		CPX	#\$19		
EAEF	90	3		BCC	LEAF2		
EAEF	4C	5E	E9	LEAEF JMP	LE95E		
EAF2	E4	F6		LEAF2 CPX	\$F6		
EAF4	F0	2		BEQ	LEAF8		
EAF6	86	F6		STX	\$F6		
EAF8	A5	33		LEAF8 LDA	\$33		
EAFB	30	F3		BMI	LEAEF		
EAFD	C5	F6		CMP	\$F6		
EAFE	B0	EF		BCS	LEAEF		
EB00	85	F5		STA	\$F5		
EB02	A5	F6		LDA	\$F6		
EB04	38			SEC			
EB05	E5	F5		SBC	\$F5		
EB07	85	F8		STA	\$F8		
EB09	E6	F8		INC	\$F8		
EB0B	A9			LDA	#\$00		
EB0D	A4	F5		LDY	\$F5		
EB0F	20	D4	EA	JSR	LEAD4		
EB12	A2	2		LDX	#\$02		
EB14	86	14		STX	\$14		
EB16	A0	1		LDY	#\$01		
EB18	B9	01		LEB18 LDA	\$0100,Y		
EB1B	F0	9		BEQ	LEB26		
EB1D	9D	50	1	STA	\$0150,X		
EB20	E6	14		INC	\$14		
EB22	C8			INY			
EB23	E8			INX			
EB24	D0	F2		BNE	LEB18		
EB26	A9	3B		LEB26 LDA	#\$3B		
EB28	9D	50	1	STA	\$0150,X		
EB2B	E6	14		INC	\$14		
EB2D	E8			INX			
EB2E	8A			TXA			
EB2F	48			PHA			
EB30	A9			LDA	#\$00		
EB32	A4	F6		LDY	\$F6		
EB34	20	D4	EA	JSR	LEAD4		
EB37	68			PLA			
EB38	AA			TAX			
EB39	A0	1		LDY	#\$01		
EB3B	B9	01		LEB3B LDA	\$0100,Y		
EB3E	F0	9		BEQ	LEB49		
EB40	9D	50	1	STA	\$0150,X		
EB43	E6	14		INC	\$14		
EB45	C8			INY			
EB46	E8			INX			
EB47	D0	F2		BNE	LEB3B		
EB49	A9	72		LEB49 LDA	#\$72		
EB4B	4C	C9	EA	JMP	LEAC9		
EB4E	A9	1B		LDA	#\$1B		
EB50	8D	50	1	STA	\$0150		

VDU TOOLKIT V1.0

EB00	60		RTS	
EB01	E6	F9	LEB01	INC \$F9
EB03	10	E4		BPL LEAE9
EB05	A5	F8		LDA \$F8
EB07	F0	8		BEQ LEB11
EB09	C6	F8		DEC \$F8
EB0B	A9	0F		LDA #\$0F
EB0D	20	EB FB	LEB0D	JSR \$FBEB
EB10	60			RTS
EB11	E6	F8	LEB11	INC \$F8
EB13	A9	0E		LDA #\$0E
EB15	10	F6		BPL LEB0D
EB17	C9	23	LEB17	CMP #\$23
EB19	F0	0F		BEQ LEB2A
EB1B	C9	3A		CMP #\$3A
EB1D	B0	0A		BCS LEB29
EB1F	C9	20	LEB1F	CMP #\$20
EB21	D0	3		BNE LEB26
EB23	4C	E2 0		JMP \$00E2
EB26	4C	63 E0	LEB26	JMP \$E063
EB29	60		LEB29	RTS
EB2A	8A		LEB2A	TXA
EB2B	48			PHA
EB2C	BA			TSX
EB2D	BD	3 1		LDA \$0103,X
EB30	C9	C6		CMP #\$C6
EB32	D0	15		BNE LEB49
EB34	98			TYA
EB35	48			PHA
EB36	A2			LDX #\$00
EB38	86	69		STX \$69
EB3A	A0	1	LEB3A	LDY #\$01
EB3C	BD	3 E8	LEB3C	LDA \$E803,X
EB3F	F0	3C		BEQ LEB7D
EB41	51	E9		EOR (\$E9),Y
EB43	D0	7		BNE LEB4C
EB45	E8			INX
EB46	C8			INX
EB47	D0	F3		BNE LEB3C
EB49	4C	8C ED	LEB49	JMP LED8C
EB4C	C9	20	LEB4C	CMP #\$20
EB4E	F0	0D		BEQ LEB5D
EB50	E6	69		INC \$69
EB52	E8		LEB52	INX
EB53	BD	3 E8		LDA \$E803,X
EB56	C9	61		CMP #\$61
EB58	90	F8		BCC LEB52
EB5A	E8			INX
EB5B	D0	DD		BNE LEB3A
EB5D	98		LEB5D	TYA
EB5E	18			CLC
EB5F	65	E9		ADC \$E9
EB61	85	E9		STA \$E9
EB63	90	2		BCC LEB67
EB65	E6	EA		INC \$EA
EB67	A9	EB	LEB67	LDA #\$EB
EB69	48			PHA
EB6A	A9	7F		LDA #\$7F
EB6C	48			PHA
EB6D	A5	69		LDA \$69
EB6F	0A			ASL A
EB70	AA			TAX
EB71	BD	70 E8		LDA \$E870,X
EB74	A8			TAY
EB75	E8			INX
EB76	BD	70 E8		LDA \$E870,X
EB79	48			PHA
EB7A	98			TYA
EB7B	48			PHA
EB7C	60			RTS

VDU Toolkit (PTL)

EB53	A9	5B		LDA #\$5B
EB55	8D	51 1		STA \$0151
EB58	20	F4 E9		JSR LE9F4
EB5B	20	E9 D5		JSR \$D5E9
EB5E	18			CLC
EB5F	E4	F2		CPX \$F2
EB61	90	3		BCC LEB66
EB63	4C	5E E9	LEB63	JMP LE95E
EB66	E4	F4	LEB66	CPX \$F4
EB68	F0	2		BEQ LEB6C
EB6A	86	F4		STX \$F4
EB6C	A5	33	LEB6C	LDA \$33
EB6E	30	F3		BMI LEB63
EB70	C5	F4		CMP \$F4
EB72	F0	EF		BEQ LEB63
EB74	B0	ED		BCS LEB63
EB76	85	F3		STA \$F3
EB78	A5	F4		LDA \$F4
EB7A	38			SEC
EB7B	E5	F3		SBC \$F3
EB7D	85	F7		STA \$F7
EB7F	A9			LDA #\$00
EB81	A4	F3		LDY \$F3
EB83	20	D4 EA		JSR LEAD4
EB86	A2	2		LDX #\$02
EB88	86	14		STX \$14
EB8A	A0	1		LDY #\$01
EB8C	B9	01	LEB8C	LDA \$0100,Y
EB8F	F0	9		BEQ LEB9A
EB91	9D	50 1		STA \$0150,X
EB94	E6	14		INC \$14
EB96	C8			INX
EB97	E8			INX
EB98	D0	F2		BNE LEB8C
EB9A	A9	3B	LEB9A	LDA #\$3B
EB9C	9D	50 1		STA \$0150,X
EB9F	E6	14		INC \$14
EBA1	E8			INX
EBA2	8A			TXA
EBA3	48			PHA
EBA4	A9			LDA #\$00
EBA6	A4	F4		LDY \$F4
EBA8	20	D4 EA		JSR LEAD4
EBAB	68			PLA
EBAC	AA			TAX
EBAD	A0	1		LDY #\$01
EBAF	B9	01	LEBAF	LDA \$0100,Y
EBB2	F0	9		BEQ LEBBD
EBB4	9D	50 1		STA \$0150,X
EBB7	E6	14		INC \$14
EBB9	C8			INX
EBBA	E8			INX
EBBB	D0	F2		BNE LEBAF
EBBD	A9	68	LEBBD	LDA #\$68
EBBF	4C	C9 EA		JMP LEAC9
EBC2	A9	1B		LDA #\$1B
EBC4	8D	50 1		STA \$0150
EBC7	A9	5B		LDA #\$5B
EBC9	8D	51 1		STA \$0151
EBCC	A9	2		LDA #\$02
EBCE	85	14		STA \$14
EBD0	20	98 D5		JSR \$D598
EBD3	48			PHA
EBD4	8A			TXA
EBD5	18			CLC
EBD6	C9	80		CMP #\$80
EBD8	F0	6		BEQ LEBE0
EBDA	B0	4		BCS LEBE0
EBDC	68		LEBDC	PLA
EBDD	4C	5E E9	LEBDD	JMP LE95E

VDU TOOLKIT V1.0

EB7D	4C	92	CD	LEB7D	JMP	\$CD92
EB80	68				PLA	
EB81	A8				TAY	
EB82	68				PLA	
EB83	AA				TAX	
EB84	4C	E2	0		JMP	\$00E2
EB87	A5	EA			LDA	\$EA
EB89	F0	3			BEQ	LEB8E
EB8B	4C	92	CD		JMP	\$CD92
EB8E	A9	64		LEB8E	LDA	#\$64
EB90	A2	0A			LDX	#\$0A
EB92	A0				LDY	#\$00
EB94	85	75			STA	\$75
EB96	86	77			STX	\$77
EB98	84	76			STY	\$76
EB9A	84	78			STY	\$78
EB9C	20	E2	0		JSR	\$00E2
EB9F	AA				TAX	
EBA0	F0	29			BEQ	LEBCB
EBA2	B0	E4			BCS	LEB88
EBA4	20	B1	C8		JSR	\$C8B1
EBA7	48				PHA	
EBA8	A5	33			LDA	\$33
EBAA	A6	34			LDX	\$34
EBAC	85	75			STA	\$75
EBAE	86	76			STX	\$76
EBB0	68				PLA	
EBB1	F0	18			BEQ	LEBCB
EBB3	C9	2C			CMP	#\$2C
EBB5	D0	D1			BNE	LEB88
EBB7	20	E2	0		JSR	\$00E2
EBBA	B0	CC			BCS	LEB88
EBBC	20	B1	C8		JSR	\$C8B1
EBBF	48				PHA	
EBC0	A5	33			LDA	\$33
EBC2	A6	34			LDX	\$34
EBC4	85	77			STA	\$77
EBC6	86	78			STX	\$78
EBC8	68				PLA	
EBC9	D0	BD			BNE	LEB88
EBCB	A5	75		LEBCB	LDA	\$75
EBCD	A6	76			LDX	\$76
EBCF	85	79			STA	\$79
EBD1	86	7A			STX	\$7A
EBD3	A5	9A			LDA	\$9A
EBD5	A6	9B			LDX	\$9B
EBD7	85	91		LEBD7	STA	\$91
EBD9	86	92			STX	\$92
EBDB	B1	91			LDA	(\$91),Y
EBDD	F0	1D			BEQ	LEBFC
EBDF	AA				TAX	
EBE0	18				CLC	
EBE1	A5	79			LDA	\$79
EBE3	65	77			ADC	\$77
EBE5	85	79			STA	\$79
EBE7	A5	7A			LDA	\$7A
EBE9	69				ADC	#\$00
EBEB	C9	FA			CMP	#\$FA
EBED	90	6			BCC	LEBF5
EBEF	EA				NOP	
EBF0	EA				NOP	
EBF1	EA				NOP	
EBF2	4C	4A	D0		JMP	\$D04A
EBF5	85	7A		LEBF5	STA	\$7A
EBF7	88				DEY	
EBF8	B1	91			LDA	(\$91),Y
EBFA	90	DB			BCC	LEBD7
EBFC	A9			LEBFC	LDA	#\$00
EBFE	85	79			STA	\$79
EC00	D8				CLD	

VDU Toolkit (PTL)

EBE0	C9	99		LEBE0	CMP	#\$99
EBE2	B0	F8			BCS	LEBDC
EBE4	A8				TAY	
EBE5	A9				LDA	#\$00
EBE7	20	D4	EA		JSR	LEAD4
EBEA	A6	14			LDX	\$14
EBEC	A0	1			LDY	#\$01
EBEE	B9	01		LEBEE	LDA	\$0100,Y
EBF1	F0	9			BEQ	LEBFC
EBF3	9D	50	1		STA	\$0150,X
EBF6	E6	14			INC	\$14
EBF8	C8				INX	
EBF9	E8				INX	
EBFA	D0	F2			BNE	LEBEE
EBFC	A9	64		LEBFC	LDA	#\$64
EBFE	9D	50	1		STA	\$0150,X
EC01	E6	14			INC	\$14
EC03	68				PLA	
EC04	C9	28			CMP	#\$28
EC06	F0	3			BEQ	LECOB
EC08	4C	F7	ED	LECO8	JMP	LEDF7
EC0B	A9	9		LECOB	LDA	#\$09
EC0D	85	EE			STA	\$\$EE
EC0F	20	98	D5	LECOF	JSR	\$D598
EC12	48				PHA	
EC13	8A				TXA	
EC14	A6	14			LDX	\$14
EC16	9D	50	1		STA	\$0150,X
EC19	E6	14			INC	\$14
EC1B	C6	EE			DEC	\$\$EE
EC1D	30	8			BMI	LEC27
EC1F	68				PLA	
EC20	C9	2C			CMP	#\$2C
EC22	D0	E4			BNE	LECO8
EC24	4C	0F	EC		JMP	LECOF
EC27	68			LEC27	PLA	
EC28	C9	29			CMP	#\$29
EC2A	D0	DC			BNE	LECO8
EC2C	4C	6D	E9		JMP	LE96D
EC2F	A9	A5			LDA	#\$A5
EC31	8D	50	1		STA	\$0150
EC34	A9	3			LDA	#\$03
EC36	85	14			STA	\$14
EC38	20	B7	EC		JSR	LECB7
EC3B	20	FB	E9		JSR	LE9FB
EC3E	A5	33			LDA	\$33
EC40	8D	51	1		STA	\$0151
EC43	A5	34			LDA	\$34
EC45	8D	52	1		STA	\$0152
EC48	4C	6D	E9		JMP	LE96D
EC4B	A9	1B			LDA	#\$1B
EC4D	8D	50	1		STA	\$0150
EC50	A9	5B			LDA	#\$5B
EC52	8D	51	1		STA	\$0151
EC55	A9	2			LDA	#\$02
EC57	85	14			STA	\$14
EC59	20	B7	EC		JSR	LECB7
EC5C	A5	34			LDA	\$34
EC5E	A4	33			LDY	\$33
EC60	20	D4	EA		JSR	LEAD4
EC63	A0	1			LDY	#\$01
EC65	A6	14		LEC65	LDX	\$14
EC67	B9	1			LDA	\$0100,Y
EC6A	F0	8			BEQ	LEC74
EC6C	9D	50	1		STA	\$0150,X
EC6F	C8				INX	
EC70	E6	14			INC	\$14
EC72	D0	F1			BNE	LEC65
EC74	A9	69		LEC74	LDA	#\$69
EC76	4C	C9	EA		JMP	LEAC9

VDU TOOLKIT V1.0

EC01	18		CLC	
EC02	A5	9A	LDA	\$9A
EC04	A6	9B	LDX	\$9B
EC06	69	3	ADC	#\$03
EC08	90	1	BCC	LECOB
EC0A	E8		INX	
EC0B	85	E9	LECOB STA	\$E9
EC0D	86	EA	STX	\$EA
EC0F	20	E2 00	LECOF JSR	\$00E2
EC12	C9		LEC12 CMP	#\$00
EC14	F0	0E	BEQ	LEC24
EC16	C9	88	CMP	#\$88
EC18	F0	1D	BEQ	LEC37
EC1A	C9	8C	CMP	#\$8C
EC1C	F0	19	BEQ	LEC37
EC1E	C9	A1	CMP	#\$A1
EC20	F0	15	BEQ	LEC37
EC22	D0	EB	BNE	LECOF
EC24	20	E2 00	LEC24 JSR	\$00E2
EC27	20	E2 0	JSR	\$00E2
EC2A	C9		CMP	#\$00
EC2C	F0	66	BEQ	LEC94
EC2E	20	E2 0	JSR	\$00E2
EC31	20	E2 0	JSR	\$00E2
EC34	18		CLC	
EC35	90	D8	BCC	LECOF
EC37	20	E2 00	LEC37 JSR	\$00E2
EC3A	B0	D6	BCS	LEC12
EC3C	AA		TAX	
EC3D	A5	E9	LDA	\$E9
EC3F	48		PHA	
EC40	A5	EA	LDA	\$EA
EC42	48		PHA	
EC43	8A		TXA	
EC44	20	B1 C8	JSR	\$C8B1
EC47	20	CD EC	JSR	LECCD
EC4A	20	94 D1	JSR	\$D194
EC4D	20	7B DC	JSR	\$DC7B
EC50	68		PLA	
EC51	AA		TAX	
EC52	68		PLA	
EC53	A8		TAY	
EC54	D0	1	BNE	LEC57
EC56	CA		DEX	
EC57	88		LEC57 DEY	
EC58	86	EA	STX	\$EA
EC5A	84	E9	STY	\$E9
EC5C	A2		LDX	#\$00
EC5E	A0		LDY	#\$00
EC60	E8		LEC60 INX	
EC61	BD	1	LDA	\$0100,X
EC64	F0	0E	BEQ	LEC74
EC66	48		PHA	
EC67	20	E2 0	JSR	\$00E2
EC6A	90	3	BCC	LEC6F
EC6C	20	1A ED	JSR	LED1A
EC6F	68		LEC6F PLA	
EC70	91	E9	STA	(\$E9),Y
EC72	D0	EC	BNE	LEC60
EC74	20	E2 00	LEC74 JSR	\$00E2
EC77	20	E8 00	LEC77 JSR	\$00E8
EC7A	B0	6	BCS	LEC82
EC7C	20	3D ED	JSR	LED3D
EC7F	18		CLC	
EC80	90	F5	BCC	LEC77
EC82	48		LEC82 PHA	
EC83	A5	79	LDA	\$79
EC85	F0	5	BEQ	LEC8C
EC87	84	79	STY	\$79
EC89	20	F9 C3	JSR	\$C3F9

VDU Toolkit (PTL)

EC79	A9	A2	LDA	#\$A2
EC7B	2C	A9 A3	BIT	#\$A3A9
EC7E	8D	50 1	STA	\$0150
EC81	A9	7	LDA	#\$07
EC83	85	14	STA	\$14
EC85	20	D4 EC	JSR	LECD4
EC88	A4	33	LDY	\$33
EC8A	A5	34	LDA	\$34
EC8C	8C	51 1	STY	\$0151
EC8F	8D	52 1	STA	\$0152
EC92	8A		TXA	
EC93	8D	55 1	STA	\$0155
EC96	20	E8 0	JSR	\$00E8
EC99	C9	2C	CMP	#\$2C
EC9B	F0	3	BEQ	LECA0
EC9D	4C	8 EC	JMP	LEC08
ECA0	20	D4 EC	LECA0 JSR	LECD4
ECA3	A4	33	LDY	\$33
ECA5	A5	34	LDA	\$34
ECA7	8C	53 1	STY	\$0153
ECAA	8D	54 1	STA	\$0154
ECAE	8A		TXA	
ECAE	8D	56 1	STA	\$0156
ECB1	20	FB E9	JSR	LE9FB
ECB4	4C	6D E9	JMP	LE96D
ECB7	20	E2 00	LECB7 JSR	\$00E2
ECBA	20	29 CC	JSR	\$CC29
ECBD	20	F5 D5	JSR	\$D5F5
ECC0	AA		TAX	
ECC1	A5	34	LECC1 LDA	\$34
ECC3	F0	0B	BEQ	LECD0
ECC5	C9	1	CMP	#\$01
ECC7	D0	8	BNE	LECD1
ECC9	18		CLC	
ECCA	A5	33	LDA	\$33
ECCC	C9	69	CMP	#\$69
ECCE	B0	1	BCS	LECD1
ECD0	60		LECD0 RTS	
ECD1	4C	DD EB	LECD1 JMP	LEBDD
ECD4	20	E2 00	LECD4 JSR	\$00E2
ECD7	20	E9 D5	JSR	\$D5E9
ECDA	4C	C1 EC	JMP	LECC1
ECDD	60		LECDD RTS	
ECDE	2C	BE	LECDE BIT	\$BE00
ECE1	10	FA	BPL	LECDD
ECE3	A9		LDA	#\$00
ECE5	85	F5	STA	\$F5
ECE7	85	22	STA	\$22
ECE9	85	23	STA	\$23
ECEB	A9	51	LDA	#\$51
ECEd	85	F2	STA	\$F2
ECEf	85	F7	STA	\$F7
ECF1	A2	18	LDX	#\$18
ECF3	86	F6	STX	\$F6
ECF5	E8		INX	
ECF6	86	F8	STX	\$F8
ECF8	A9	60	LDA	#\$60
ECFA	85	21	STA	\$21
ECFC	A9	4C	LDA	#\$4C
ECFE	8D	7A E5	STA	#\$E57A
ED01	A2	EF	LDX	#\$EF
ED03	8E	7C E5	STX	#\$E57C
ED06	CA		DEX	
ED07	8E	46 E5	STX	#\$E546
ED0A	A9	20	LDA	#\$20
ED0C	8D	44 E5	STA	#\$E544
ED0F	A9	F6	LDA	#\$F6
ED11	8D	45 E5	STA	#\$E545
ED14	A9	EA	LDA	#\$EA
ED16	8D	47 E5	STA	#\$E547

VDU TOOLKIT V1.0

EC8C	68	LEC8C	PLA	
EC8D	C9 2C		CMP	#\$2C
EC8F	F0 A6		BEQ	LEC37
EC91	4C 12 EC		JMP	LEC12
EC94	A5 9A	LEC94	LDA	\$9A
EC96	A6 9B		LDX	\$9B
EC98	85 7A	LEC98	STA	\$7A
EC9A	86 7B		STX	\$7B
EC9C	A0 1		LDY	#\$01
EC9E	B1 7A		LDA	(\$7A),Y
ECA0	F0 22		BEQ	LECC4
ECA2	C8		INY	
ECA3	A5 75		LDA	\$75
ECA5	48		PHA	
ECA6	A6 76		LDX	\$76
ECA8	91 7A		STA	(\$7A),Y
ECAA	C8		INY	
ECAB	8A		TXA	
ECAC	91 7A		STA	(\$7A),Y
ECAE	68		PLA	
ECAF	18		CLC	
ECB0	65 77		ADC	\$77
ECB2	85 75		STA	\$75
ECB4	8A		TXA	
ECB5	65 78		ADC	\$78
ECB7	85 76		STA	\$76
ECB9	A0 1		LDY	#\$01
ECBB	B1 7A		LDA	(\$7A),Y
ECBD	AA		TAX	
ECBE	88		DEY	
ECBF	B1 7A		LDA	(\$7A),Y
ECC1	18		CLC	
ECC2	90 D4		BCC	LEC98
ECC4	20 F9 C3	LECC4	JSR	#\$C3F9
ECC7	20 3A C5		JSR	#\$C53A
ECCA	4C 4B C3		JMP	#\$C34B
ECCD	A5 75	LECCD	LDA	\$75
ECCF	A6 76		LDX	\$76
ECD1	85 7C		STA	\$7C
ECD3	86 7D		STX	\$7D
ECD5	A5 9A		LDA	\$9A
ECD7	A6 9B		LDX	\$9B
ECD9	85 7A	LECD9	STA	\$7A
ECDB	86 7B		STX	\$7B
ECDD	A0 1		LDY	#\$01
ECDF	B1 7A		LDA	(\$7A),Y
ECE1	F0 32		BEQ	LED15
ECE3	C8		INY	
ECE4	C8		INY	
ECE5	A5 34		LDA	\$34
ECE7	D1 7A		CMP	(\$7A),Y
ECE9	90 2A		BCC	LED15
ECEB	D0 0B		BNE	LECF8
ECED	88		DEY	
EC EE	A5 33		LDA	\$33
ECF0	D1 7A		CMP	(\$7A),Y
ECF2	90 21		BCC	LED15
ECF4	D0 2		BNE	LECF8
ECF6	F0 18		BEQ	LED10
ECF8	18	LECF8	CLC	
ECF9	A5 7C		LDA	\$7C
ECFB	65 77		ADC	\$77
ECFD	85 7C		STA	\$7C
ECFF	A5 7D		LDA	\$7D
ED01	65 78		ADC	\$78
ED03	85 7D		STA	\$7D
ED05	A0 1		LDY	#\$01
ED07	B1 7A		LDA	(\$7A),Y
ED09	AA		TAX	
ED0A	88		DEY	

VDU Toolkit (PTL)

ED19	A9 65		LDA	#\$65
ED1B	8D 7B E5		STA	#\$57B
ED1E	20 9F EF		JSR	LEF9F
ED21	D0 17		BNE	LED3A
ED23	A2 6		LDX	#\$06
ED25	BD 47 ED	LED25	LDA	#\$ED47,X
ED28	95 EB		STA	#\$EB,X
ED2A	CA		DEX	
ED2B	10 F8		BPL	LED25
ED2D	E8	LED2D	INX	
ED2E	BD 55 ED	LED2E	LDA	#\$ED55,X
ED31	F0 6		BEQ	LED39
ED33	20 0E F8		JSR	#\$F80E
ED36	E8		INX	
ED37	D0 F5		BNE	LED2E
ED39	60	LED39	RTS	
ED3A	A2 6	LED3A	LDX	#\$06
ED3C	BD 4E ED	LED3C	LDA	#\$ED4E,X
ED3F	95 EB		STA	#\$EB,X
ED41	CA		DEX	
ED42	10 F8		BPL	LED3C
ED44	4C 2D ED		JMP	LED2D
ED47	4C 7E ED		JMP	LED7E
ED4A			BRK	
ED4B	4C 82 ED		JMP	LED82
ED4E	4C 8F ED		JMP	LED8F
ED51			BRK	
ED52	4C 97 ED		JMP	LED97
ED55	6 0C		ASL	#\$0C
ED57	0D 0E 20			⊠
ED5A	56 49			V I
ED5C	44			D
ED5D	45 4F			E O
ED5F	20 54 6F			T o
ED62	6F			o
ED63	6C 6B 69			l k i
ED66	74			t
ED67	20 28 63			(c
ED6A	29 20)
ED6C	3A			:
ED6D	20 4F 50			O P
ED70	45 52			E R
ED72	41 54			A T
ED74	49 4F			I O
ED76	4E 41 4C			N A L
ED79	20 0F 0D			⊠
ED7C	0A		ASL	A
ED7D			BRK	
ED7E	C9 23	LED7E	CMP	#\$23
ED80	F0 0A		BEQ	LED8C
ED82	C9 20	LED82	CMP	#\$20
ED84	D0 3		BNE	LED89
ED86	4C E2 0		JMP	#\$00E2
ED89	4C A8	LED89	JMP	#\$A800
ED8C	4C A2 ED	LED8C	JMP	LEDA2
ED8F	C9 23	LED8F	CMP	#\$23
ED91	F0 0F		BEQ	LEDA2
ED93	C9 3A		CMP	#\$3A
ED95	B0 0A		BCS	LEDA1
ED97	C9 20	LED97	CMP	#\$20
ED99	D0 3		BNE	LED9E
ED9B	4C E2 0		JMP	#\$00E2
ED9E	4C 63 E0	LED9E	JMP	#\$E063
EDA1	60	LEDA1	RTS	
EDA2	8A	LEDA2	TXA	
EDA3	48		PHA	
EDA4	BA		TSX	
EDA5	BD 3 1		LDA	#\$0103,X
EDA8	C9 C6		CMP	#\$C6
EDAA	D0 15		BNE	LEDC1

VDU TOOLKIT V1.0

ED0B	B1 7A	LDA	(\$7A),Y
ED0D	18	CLC	
ED0E	90 C9	BCC	LECD9
ED10	A5 7D	LED10 LDA	\$7D
ED12	A4 7C	LDY	\$7C
ED14	60	RTS	
ED15	A9 7F	LED15 LDA	#\$7F
ED17	A0 FF	LDY	#\$FF
ED19	60	RTS	
ED1A	8A	LED1A TXA	
ED1B	48	PHA	
ED1C	98	TYA	
ED1D	48	PHA	
ED1E	20 5C ED	JSR	LED5C
ED21	B1 7A	LDA	(\$7A),Y
ED23	C8	LED23 INY	
ED24	48	PHA	
ED25	B1 7A	LDA	(\$7A),Y
ED27	AA	TAX	
ED28	68	PLA	
ED29	91 7A	STA	(\$7A),Y
ED2B	88	DEY	
ED2C	20 67 ED	JSR	LED67
ED2F	8A	TXA	
ED30	90 F1	BCC	LED23
ED32	68	PLA	
ED33	A8	TAY	
ED34	68	PLA	
ED35	AA	TAX	
ED36	E6 9C	INC	\$9C
ED38	D0 2	BNE	LED3C
ED3A	E6 9D	INC	\$9D
ED3C	60	LED3C RTS	
ED3D	8A	LED3D TXA	
ED3E	48	PHA	
ED3F	98	TYA	
ED40	48	PHA	
ED41	20 5C ED	JSR	LED5C
ED44	C8	LED44 INY	
ED45	B1 7A	LDA	(\$7A),Y
ED47	88	DEY	
ED48	91 7A	STA	(\$7A),Y
ED4A	20 67 ED	JSR	LED67
ED4D	90 F5	BCC	LED44
ED4F	68	PLA	
ED50	A8	TAY	
ED51	68	PLA	
ED52	AA	TAX	
ED53	A5 9C	LDA	\$9C
ED55	D0 2	BNE	LED59
ED57	C6 9D	DEC	\$9D
ED59	C6 9C	LED59 DEC	\$9C
ED5B	60	RTS	
ED5C	A5 E9	LED5C LDA	\$E9
ED5E	A6 EA	LDX	\$EA
ED60	85 7A	STA	\$7A
ED62	86 7B	STX	\$7B
ED64	E6 79	INC	\$79
ED66	60	RTS	
ED67	E6 7A	LED67 INC	\$7A
ED69	D0 2	BNE	LED6D
ED6B	E6 7B	INC	\$7B
ED6D	A5 7B	LED6D LDA	\$7B
ED6F	C5 9D	CMP	\$9D
ED71	90 0A	BCC	LED7D
ED73	D0 8	BNE	LED7D
ED75	A5 7A	LDA	\$7A
ED77	C5 9C	CMP	\$9C
ED79	90 4	BCC	LED7F
ED7B	F0 1	BEQ	LED7E

VDU Toolkit (PTL)

EDAC	98	TYA	
EDAD	48	PHA	
EDAE	A2	LDX	#\$00
EDB0	86 13	STX	\$13
EDB2	A0 1	LEDB2 LDY	#\$01
EDB4	BD 3 E8	LEDB4 LDA	\$E803,X
EDB7	F0 3E	BEQ	LEDF7
EDB9	51 E9	EOR	(\$E9),Y
EDBB	D0 7	BNE	LEDC4
EDBD	E8	INX	
EDBE	C8	INY	
EDBF	D0 F3	BNE	LEDB4
EDC1	4C 0D EE	LEDC1 JMP	LEE0D
EDC4	C9 20	LEDC4 CMP	#\$20
EDC6	F0 0F	BEQ	LEDD7
EDC8	E6 13	INC	\$13
EDCA	BD 3 E8	LEDCA LDA	\$E803,X
EDCD	C9 61	CMP	#\$61
EDCF	B0 3	BCS	LEDD4
EDD1	E8	INX	
EDD2	D0 F6	BNE	LEDC4
EDD4	E8	LEDD4 INX	
EDD5	D0 DB	BNE	LEDB2
EDD7	98	LEDD7 TYA	
EDD8	18	CLC	
EDD9	65 E9	ADC	\$E9
EDDB	85 E9	STA	\$E9
EDDD	90 2	BCC	LEDE1
EDDF	E6 EA	INC	\$EA
EDE1	A9 ED	LEDE1 LDA	#\$ED
EDE3	48	PHA	
EDE4	A9 F9	LDA	#\$F9
EDE6	48	PHA	
EDE7	A5 13	LDA	\$13
EDE9	0A	ASL	A
EDEA	AA	TAX	
EDEB	BD 9E E8	LDA	\$E89E,X
EDEE	A8	TAY	
EDF0	BD 9E E8	LDA	\$E89E,X
EDF3	48	PHA	
EDF4	98	TYA	
EDF5	48	PHA	
EDF6	60	RTS	
EDF7	4C 92 CD	LEDF7 JMP	\$CD92
EDFA	68	PLA	
EDFB	A8	TAY	
EDFC	68	PLA	
EDFD	AA	TAX	
EDFE	4C E2 0	JMP	\$00E2
EE01	44		D
EE02	45 C3		E Æ
EE04	48		H
EE05	45 58		E X
EE07	A4		
EE09	62		'b'
EE0A	EE B4 EE	INC	\$EEB4
EE0D	C9 CD	LEE0D CMP	#\$CD
EE0F	F0 7	BEQ	LEE18
EE11	68	PLA	
EE12	AA	TAX	
EE13	A9 23	LDA	#\$23
EE15	4C 9E ED	JMP	LED9E
EE18	68	LEE18 PLA	
EE19	A2	LDX	#\$00
EE1B	86 EE	STX	\$EE
EE1D	A0 1	LEE1D LDY	#\$01
EE1F	BD 1 EE	LEE1F LDA	#\$EE01,X
EE22	D0 3	BNE	LEE27
EE24	4C 92 CD	JMP	\$CD92

VDU TOOLKIT V1.0

ED7D	60	LED7D	RTS	
ED7E	18	LED7E	CLC	
ED7F	60	LED7F	RTS	
ED80	44			D
ED81	45 C3			E Å
ED83	48			H
ED84	45 58			E X
ED86	A4	LDY	\$00	
ED88	E1 ED	SBC	(\$ED,X)	
ED8A	36 EE	ROL	\$EE,X	
ED8C	C9 CD	LED8C	CMP	#\$CD
ED8E	F0 7	BEQ	LED97	
ED90	68	PLA		
ED91	AA	TAX		
ED92	A9 23	LDA	#\$23	
ED94	4C 63 E0	JMP	\$E063	
ED97	68	LED97	PLA	
ED98	A2	LDX	#\$00	
ED9A	86 EE	STX	\$EE	
ED9C	A0 1	LED9C	LDY	#\$01
ED9E	BD 80 ED	LED9E	LDA	\$(ED80,X)
EDA1	D0 3	BNE	LEDA6	
EDA3	4C 92 CD	JMP	\$(CD92)	
EDA6	51 E9	LEDA6	EOR	\$(E9),Y
EDA8	D0 4	BNE	LEDAE	
EDAA	E8	INX		
EDAB	C8	INX		
EDAC	D0 F0	BNE	LED9E	
EDAE	C9 80	LEDAE	CMP	#\$80
EDB0	F0 0B	BEQ	LEDBD	
EDB2	E6 EE	INC	\$EE	
EDB4	E8	LEDB4	INX	
EDB5	BD 80 ED	LDA	\$(ED80,X)	
EDB8	10 FA	BPL	LEDB4	
EDBA	E8	INX		
EDBB	D0 DF	BNE	LED9C	
EDBD	C8	LEDBD	INX	
EDBE	68	PLA		
EDBF	68	PLA		
EDC0	98	TYA		
EDC1	18	CLC		
EDC2	65 E9	ADC	\$E9	
EDC4	85 E9	STA	\$E9	
EDC6	90 2	BCC	LEDCA	
EDC8	E6 EA	INC	\$EA	
EDCA	A5 EE	LEDCA	LDA	\$EE
EDCC	0A	ASL	A	
EDCD	AA	TAX		
EDCE	BD 88 ED	LDA	\$(ED88,X)	
EDD1	A8	TAY		
EDD2	E8	INX		
EDD3	BD 88 ED	LDA	\$(ED88,X)	
EDD6	48	PHA		
EDD7	98	TYA		
EDD8	48	PHA		
EDD9	A5 28	LDA	\$28	
EDDB	49 FF	EOR	#\$FF	
EDDD	85 28	STA	\$28	
EDDF	4C E8 0	JMP	\$00E8	
EDE2	20 7B CD	JSR	\$(CD7B)	
EDE5	20 7F D5	JSR	\$(D57F)	
EDE8	D0 3	BNE	LEDED	
EDEA	4C F5 D6	JMP	\$(D6F5)	
EDED	20 F6 ED	LEDED	JSR	\$(EDF6)
EDF0	20 94 D1	JSR	\$(D194)	
EDF3	4C E8 0	JMP	\$00E8	
EDF6	A6 0A	LEDF6	LDX	\$0A
EDF8	A4 0B	LDY	\$0B	
EDFA	86 E0	STX	\$E0	
EDFC	84 E1	STY	\$E1	

VDU Toolkit (PTL)

EE27	51 E9	LEE27	EOR	\$(E9),Y
EE29	D0 4	BNE	LEE2F	
EE2B	E8	INX		
EE2C	C8	INX		
EE2D	D0 F0	BNE	LEE1F	
EE2F	C9 80	LEE2F	CMP	#\$80
EE31	F0 0B	BEQ	LEE3E	
EE33	E6 EE	INC	\$EE	
EE35	E8	LEE35	INX	
EE36	BD 1 EE	LDA	\$(EE01,X)	
EE39	10 FA	BPL	LEE35	
EE3B	E8	INX		
EE3C	D0 DF	BNE	LEE1D	
EE3E	C8	LEE3E	INX	
EE3F	68	PLA		
EE40	68	PLA		
EE41	98	TYA		
EE42	18	CLC		
EE43	65 E9	ADC	\$E9	
EE45	85 E9	STA	\$E9	
EE47	90 2	BCC	LEE4B	
EE49	E6 EA	INC	\$EA	
EE4B	A5 EE	LEE4B	LDA	\$EE
EE4D	0A	ASL	A	
EE4E	AA	TAX		
EE4F	BD 9 EE	LDA	\$(EE09,X)	
EE52	A8	TAY		
EE53	E8	INX		
EE54	BD 9 EE	LDA	\$(EE09,X)	
EE57	48	PHA		
EE58	98	TYA		
EE59	48	PHA		
EE5A	A5 28	LDA	\$28	
EE5C	49 FF	EOR	#\$FF	
EE5E	85 28	STA	\$28	
EE60	4C E8 0	JMP	\$00E8	
EE63	20 7B CD	JSR	\$(CD7B)	
EE66	20 7F D5	JSR	\$(D57F)	
EE69	D0 3	BNE	LEE6E	
EE6B	4C F5 D6	JMP	\$(D6F5)	
EE6E	20 77 EE	LEE6E	JSR	\$(EE77)
EE71	20 94 D1	JSR	\$(D194)	
EE74	4C E8 0	JMP	\$00E8	
EE77	A6 0A	LEE77	LDX	\$0A
EE79	A4 0B	LDY	\$0B	
EE7B	86 E0	STX	\$E0	
EE7D	84 E1	STY	\$E1	
EE7F	A8	TAY		
EE80	B1 91	LDA	\$(91),Y	
EE82	48	PHA		
EE83	A9 FF	LDA	#\$FF	
EE85	91 91	STA	\$(91),Y	
EE87	98	TYA		
EE88	48	PHA		
EE89	A0 FF	LDY	#\$FF	
EE8B	A6 91	LDX	\$91	
EE8D	A5 92	LDA	\$92	
EE8F	86 0A	STX	\$0A	
EE91	85 0B	STA	\$0B	
EE93	20 17 F8	JSR	\$(F817)	
EE96	8	PHP		
EE97	68	PLA		
EE98	AA	TAX		
EE99	68	PLA		
EE9A	A8	TAY		
EE9B	68	PLA		
EE9C	91 91	STA	\$(91),Y	
EE9E	A5 E0	LDA	\$E0	
EEA0	A4 E1	LDY	\$E1	
EEA2	85 0A	STA	\$0A	

VDU TOOLKIT V1.0

EDFE	A8		TAY	
EDFF	B1 91		LDA (\$91),Y	
EE01	48		PHA	
EE02	A9 FF		LDA # \$FF	
EE04	91 91		STA (\$91),Y	
EE06	98		TYA	
EE07	48		PHA	
EE08	A0 FF		LDY # \$FF	
EE0A	A6 91		LDX \$91	
EE0C	A5 92		LDA \$92	
EE0E	86 0A		STX \$0A	
EE10	85 0B		STA \$0B	
EE12	20 28 FF		JSR \$FF28	
EE15	8		PHP	
EE16	68		PLA	
EE17	AA		TAX	
EE18	68		PLA	
EE19	A8		TAY	
EE1A	68		PLA	
EE1B	91 91		STA (\$91),Y	
EE1D	A5 E0		LDA \$E0	
EE1F	A4 E1		LDY \$E1	
EE21	85 0A		STA \$0A	
EE23	84 0B		STY \$0B	
EE25	8A		TXA	
EE26	48		PHA	
EE27	28		PLP	
EE28	F0 3		BEQ LEE2D	
EE2A	EA		NOP	
EE2B	EA		NOP	
EE2C	EA		NOP	
EE2D	70 3	LEE2D	BVS LEE32	
EE2F	4C 4A D0		JMP \$D04A	
EE32	A5 14	LEE32	LDA \$14	
EE34	A4 13		LDY \$13	
EE36	60		RTS	
EE37	20 7B CD		JSR \$CD7B	
EE3A	20 F5 D5		JSR \$D5F5	
EE3D	20 4A EE		JSR LEE4A	
EE40	A9 FF		LDA # \$FF	
EE42	A0		LDY # \$00	
EE44	20 88 D2		JSR \$D288	
EE47	4C E8 0		JMP \$00E8	
EE4A	A0	LEE4A	LDY # \$00	
EE4C	20 5A EE		JSR LEE5A	
EE4F	A5 33		LDA \$33	
EE51	20 5A EE		JSR LEE5A	
EE54	A9		LDA # \$00	
EE56	99 FF 0		STA \$00FF,Y	
EE59	60		RTS	
EE5A	48	LEE5A	PHA	
EE5B	A2 1		LDX # \$01	
EE5D	4A		LSR A	
EE5E	4A		LSR A	
EE5F	4A		LSR A	
EE60	4A		LSR A	
EE61	18	LEE61	CLC	
EE62	69 30		ADC # \$30	
EE64	C9 3A		CMP # \$3A	
EE66	30 3		BMI LEE6B	
EE68	18		CLC	
EE69	69 7		ADC # \$07	
EE6B	99 FF 00	LEE6B	STA \$00FF,Y	
EE6E	C8		INY	
EE6F	CA		DEX	
EE70	10 1		BPL LEE73	
EE72	60		RTS	
EE73	68	LEE73	PLA	
EE74	29 0F		AND # \$0F	
EE76	10 E9		BPL LEE61	

VDU Toolkit (PTL)

EEA4	84 0B		STY \$0B	
EEA6	8A		TXA	
EEA7	48		PHA	
EEA8	28		PLP	
EEA9	D0 2		BNE LEEAD	
EEAB	70 3		BVS LEEB0	
EEAD	4C 5E E9	LEEAD	JMP LE95E	
EEB0	A5 14	LEEB0	LDA \$14	
EEB2	A4 13		LDY \$13	
EEB4	60		RTS	
EEB5	20 7B CD		JSR \$CD7B	
EEB8	20 F5 D5		JSR \$D5F5	
EEBB	20 C8 EE		JSR LEEC8	
EEBE	A9 FF		LDA # \$FF	
EEC0	A0		LDY # \$00	
EEC2	20 88 D2		JSR \$D288	
EEC5	4C E8 0		JMP \$00E8	
EEC8	A0	LEEC8	LDY # \$00	
EECA	20 D8 EE		JSR LEED8	
EECD	A5 33		LDA \$33	
EECF	20 D8 EE		JSR LEED8	
EED2	A9		LDA # \$00	
EED4	99 FF 0		STA \$00FF,Y	
EED7	60		RTS	
EED8	48	LEED8	PHA	
EED9	A2 1		LDX # \$01	
EEDB	4A		LSR A	
EEDC	4A		LSR A	
EEDD	4A		LSR A	
EEDE	4A		LSR A	
EEDF	18	LEEDF	CLC	
EEE0	69 30		ADC # \$30	
EEE2	C9 3A		CMP # \$3A	
EEE4	30 3		BMI LEEE9	
EEE6	18		CLC	
EEE7	69 7		ADC # \$07	
EEE9	99 FF 00	LEEE9	STA \$00FF,Y	
EEEC	C8		INY	
EEED	CA		DEX	
EEEE	10 1		BPL LEEF1	
EEF0	60		RTS	
EEF1	68	LEEF1	PLA	
EEF2	29 0F		AND # \$0F	
EEF4	10 E9		BPL LEEDF	
EEF6	A9		LDA # \$00	
EEF8	85 EE		STA \$EE	
EEFA	A2 1		LDX # \$01	
EEFC	8A		TXA	
EEFD	20 15 EA		JSR LEA15	
EF00	20 7 E9		JSR LE907	
EF03	A9 0D		LDA # \$0D	
EF05	20 21 E9		JSR LE921	
EF08	A2		LDX # \$00	
EF0A	BD C0 02	LEFOA	LDA \$02C0,X	
EF0D	20 21 E9		JSR LE921	
EF10	E8		INX	
EF11	E0 40		CPX # \$40	
EF13	D0 F5		BNE LEFOA	
EF15	A2		LDX # \$00	
EF17	BD 03	LEF17	LDA \$0300,X	
EF1A	20 21 E9		JSR LE921	
EF1D	E8		INX	
EF1E	E0 0F		CPX # \$0F	
EF20	D0 F5		BNE LEF17	
EF22	20 7 E9		JSR LE907	
EF25	A9 0D		LDA # \$0D	
EF27	20 21 E9		JSR LE921	
EF2A	A2 6		LDX # \$06	
EF2C	A0		LDY # \$00	
EF2E	60		RTS	

VDU TOOLKIT V1.0

EE78	FF				
EE79	FF				
EE7A	FF				
EE7B	A9 4C	LEE7B	LDA	#\$4C	
EE7D	8D 7A E5		STA	\$E57A	
EE80	8D D2 E5		STA	\$E5D2	
EE83	8D 20 E6		STA	\$E620	
EE86	A9 EF		LDA	#\$EF	
EE88	8D 46 E5		STA	\$E546	
EE8B	8D 7C E5		STA	\$E57C	
EE8E	8D D4 E5		STA	\$E5D4	
EE91	8D 22 E6		STA	\$E622	
EE94	A9 20		LDA	#\$20	
EE96	8D 44 E5		STA	\$E544	
EE99	A9 3		LDA	#\$03	
EE9B	8D 45 E5		STA	\$E545	
EE9E	A9 EA		LDA	#\$EA	
EEA0	8D 47 E5		STA	\$E547	
EEA3	A9		LDA	#\$00	
EEA5	8D 7B E5		STA	\$E57B	
EEA8	A9 65		LDA	#\$65	
EEAA	8D D3 E5		STA	\$E5D3	
EEAD	A9 9F		LDA	#\$9F	
EEAF	4C 26 E9		JMP	LE926	
EEB2	A2 6	LEEB2	LDX	#\$06	
EEB4	BD F9 EE	LEEB4	LDA	\$\$\$EF9,X	
EEB7	95 EB		STA	\$\$\$EB,X	
EEB9	CA		DEX		
EEBA	10 F8		BPL	LEEB4	
EEBC	E8	LEEBC	INX		
EEBD	8A		TXA		
EEBE	95 F2	LEEBE	STA	\$\$\$F2,X	
EECO	E8		INX		
EEC1	E0 8		CPX	#\$08	
EEC3	D0 F9		BNE	LEEBE	
EEC5	A2		LDX	#\$00	
EEC7	BD D4 EE	LEEC7	LDA	\$\$\$EED4,X	
EECA	F0 7		BEQ	LEED3	
EECC	20 0E F8		JSR	\$\$\$F80E	
EECF	E8		INX		
EED0	4C C7 EE		JMP	LEEC7	
EED3	60	LEED3	RTS		
EED4	0C				
EED5	0D 56 44				V D
EED8	55 20				U
EEDA	38				8
EEDB	30 2F				0 /
EEDD	38				8
EEDE	32				2
EEDF	20 54 6F				T o
EEE2	6F				o
EEE3	6C 6B 69				l k i
EEE6	74				t
EEE7	20 3A 20				:
EEEA	4F				O
EEEB	50 45				P E
EEED	52				R
EEEE	41 54				A T
EEFO	49 4F				I O
EEF2	4E 41 4C				N A L
EEF5	2E 0D 0A				.
EEF8			BRK		.
EEF9	4C 17 EB		JMP	LEB17	Ⓢ
EEFC			BRK		
EEFD	4C 1F EB		JMP	LEB1F	
EF00	4C 85 EF		JMP	LEF85	
EF03	A9		LDA	#\$00	
EF05	85 EE		STA	\$\$\$EE	
EF07	A9 1A	LEF07	LDA	\$\$\$1A	
EF09	20 65 E9		JSR	LE965	

VDU Toolkit (PTL)

EF2F	98	LEF2F	TYA		
EF30	D0 7		BNE	LEF39	
EF32	E0 6		CPX	\$\$\$06	
EF34	F0 8		BEQ	LEF3E	
EF36	CA		DEX		
EF37	A0 20		LDY	\$\$\$20	
EF39	20 F8 E8	LEF39	JSR	LE8F8	
EF3C	C6 EE		DEC	\$\$\$EE	
EF3E	60	LEF3E	RTS		
EF3F	98	LEF3F	TYA		
EF40	C9 1F		CMP	\$\$\$1F	
EF42	D0 7		BNE	LEF4B	
EF44	E0 8		CPX	\$\$\$08	
EF46	F0 8		BEQ	LEF50	
EF48	E8		INX		
EF49	A0 FF		LDY	\$\$\$FF	
EF4B	20 FB E8	LEF4B	JSR	LE8FB	
EF4E	E6 EE		INC	\$\$\$EE	
EF50	60	LEF50	RTS		
EF51	98	LEF51	TYA		
EF52	D0 6		BNE	LEF5A	
EF54	E0 6		CPX	\$\$\$06	
EF56	F0 F8		BEQ	LEF50	
EF58	C6 EE		DEC	\$\$\$EE	
EF5A	A9 7F	LEF5A	LDA	\$\$\$7F	
EF5C	4C 21 E9		JMP	LE921	
EF5F	20 FB E8	LEF5F	JSR	LE8FB	
EF62	4C 5A EF		JMP	LEF5A	
EF65	A5 1		LDA	\$\$\$01	
EF67	C9 0C		CMP	\$\$\$0C	
EF69	D0 3		BNE	LEF6E	
EF6B	20 2F EF		JSR	LEF2F	
EF6E	C9 12	LEF6E	CMP	\$\$\$12	
EF70	D0 3		BNE	LEF75	
EF72	20 3F EF		JSR	LEF3F	
EF75	C9 7F	LEF75	CMP	\$\$\$7F	
EF77	D0 3		BNE	LEF7C	
EF79	20 51 EF		JSR	LEF51	
EF7C	C9 5	LEF7C	CMP	\$\$\$05	
EF7E	D0 0A		BNE	LEF8A	
EF80	20 5F EF		JSR	LEF5F	
EF83	A5 1	LEF83	LDA	\$\$\$01	
EF85	C9 0C		CMP	\$\$\$0C	
EF87	4C 7E E5		JMP	\$\$\$E57E	
EF8A	C9 20	LEF8A	CMP	\$\$\$20	
EF8C	90 F5		BCC	LEF83	
EF8E	C9 7E		CMP	\$\$\$7E	
EF90	B0 F1		BCS	LEF83	
EF92	48		PHA		
EF93	20 1F E9		JSR	LE91F	
EF96	68		PLA		
EF97	20 21 E9		JSR	LE921	
EF9A	E6 EE		INC	\$\$\$EE	
EF9C	4C 83 EF		JMP	LEF83	
EF9F	A2	LEF9F	LDX	\$\$\$00	
EFA1	8E 91 BF		STX	\$\$\$BF91	
EFA4	8E 91 BF		STX	\$\$\$BF91	
EFA7	CA		DEX		
EFA8	8E 92 BF		STX	\$\$\$BF92	
EFAB	AE 91 BF		LDX	\$\$\$BF91	
EFAE	AE 91 BF		LDX	\$\$\$BF91	
EFB1	60		RTS		
EFB2	FF				
EFB3	FF				
EFB4	FF				
EFB5	FF				
EFB6	FF				
EFB7	FF				
EFB8	FF				
EFB9	FF				

VDU TOOLKIT V1.0

EF0C	A9	0D	LEF0C	LDA	#\$0D
EF0E	20	EB	FB	JSR	\$FBEB
EF11	A2			LDX	#\$00
EF13	BD	C0	02	LEF13	LDA \$02C0,X
EF16	20	EB	FB	JSR	\$FBEB
EF19	E8			INX	
EF1A	E0	40		CPX	#\$40
EF1C	D0	F5		BNE	LEF13
EF1E	A2			LDX	#\$00
EF20	BD		03	LEF20	LDA \$0300,X
EF23	20	EB	FB	JSR	\$FBEB
EF26	E8			INX	
EF27	E0	10		CPX	#\$10
EF29	D0	F5		BNE	LEF20
EF2B	A9	1A		LDA	#\$1A
EF2D	20	EB	FB	JSR	\$FBEB
EF30	A9	1A		LDA	#\$1A
EF32	20	EB	FB	LEF32	JSR \$FBEB
EF35	A9	0D		LDA	#\$0D
EF37	20	EB	FB	JSR	\$FBEB
EF3A	A2	6		LDX	#\$06
EF3C	A0			LDY	#\$00
EF3E	60			RTS	
EF3F	98		LEF3F	TYA	
EF40	D0	7		BNE	LEF49
EF42	E0	6		CPX	#\$06
EF44	F0	0A		BEQ	LEF50
EF46	CA			DEX	
EF47	A0	20		LDY	#\$20
EF49	A9	8	LEF49	LDA	#\$08
EF4B	20	EB	FB	JSR	\$FBEB
EF4E	C6	EE		DEC	\$EE
EF50	60		LEF50	RTS	
EF51	98		LEF51	TYA	
EF52	C9	1F		CMP	#\$1F
EF54	D0	7		BNE	LEF5D
EF56	E0	8		CPX	#\$08
EF58	F0	0A		BEQ	LEF64
EF5A	E8			INX	
EF5B	A0	FF		LDY	#\$FF
EF5D	A9	9	LEF5D	LDA	#\$09
EF5F	20	EB	FB	JSR	\$FBEB
EF62	E6	EE		INC	\$EE
EF64	60		LEF64	RTS	
EF65	8A			TXA	
EF66	48			PHA	
EF67	20	7	EF	JSR	LEF07
EF6A	A5	1		LDA	\$01
EF6C	C9	7F		CMP	#\$7F
EF6E	D0	2		BNE	LEF72
EF70	C6	EE		DEC	\$EE
EF72	A6	EE	LEF72	LDX	\$EE
EF74	A9	9	LEF74	LDA	#\$09
EF76	20	EB	FB	JSR	\$FBEB
EF79	CA			DEX	
EF7A	8A			TXA	
EF7B	D0	F7		BNE	LEF74
EF7D	68			PLA	
EF7E	AA			TAX	
EF7F	68			PLA	
EF80	A8			TAY	
EF81	68			PLA	
EF82	4C	D5	E5	JMP	\$E5D5
EF85	A5	1	LEF85	LDA	\$01
EF87	48			PHA	
EF88	C9	0C		CMP	#\$0C
EF8A	D0	6		BNE	LEF92
EF8C	20	3F	EF	JSR	LEF3F
EF8F	4C	99	EF	JMP	LEF99
EF92	C9	12	LEF92	CMP	#\$12

VDU Toolkit (PTL)

EFBA	FF
EFBB	FF
EFBC	FF
EFBD	FF
EFBE	FF
EFBF	FF
EFC0	FF
EFC1	FF
EFC2	FF
EFC3	FF
EFC4	FF
EFC5	FF
EFC6	FF
EFC7	FF
EFC8	FF
EFC9	FF
EFCA	FF
EFCB	FF
EFCC	FF
EFCD	FF
EFCF	FF
EFD0	FF
EFD1	FF
EFD2	FF
EFD3	FF
EFD4	FF
EFD5	FF
EFD6	FF
EFD7	FF
EFD8	FF
EFD9	FF
EFDA	FF
EFDB	FF
EFDC	FF
EFDD	FF
EFDE	FF
EFDF	FF
EFE0	FF
EFE1	FF
EFE2	FF
EFE3	FF
EFE4	FF
EFE5	FF
EFE6	FF
EFE7	FF
EFE8	FF
EFE9	FF
EFEA	FF
EFEB	FF
EFEC	FF
EFED	FF
EFEE	FF
EFEF	9 FF
EFF1	FF
EFF2	FF
EFF3	FF
EFF4	FF
EFF5	FF
EFF6	FF
EFF7	2
EFF8	FF
EFF9	FF
EFFA	FF
EFFB	FF
EFFC	FF
EFFD	FF
EF FE	FF
EFF F	FF

BRK
.END

VDU TOOLKIT V1.0

EF94	D0 3		BNE	LEF99
EF96	20 51 EF		JSR	LEF51
EF99	68	LEF99	PLA	
EF9A	C9 0C		CMP	#\$0C
EF9C	4C 7E E5		JMP	#\$E57E
EF9F	8A		TXA	
EFA0	48		PHA	
EFA1	98		TYA	
EFA2	48		PHA	
EFA3	A5 1		LDA	\$01
EFA5	C9 20		CMP	#\$20
EFA7	90 14		BCC	LEFBD
EFA9	C9 7E		CMP	#\$7E
EFAB	B0 10		BCS	LEFBD
EFAD	20 7 EF		JSR	LEF07
EFB0	E6 EE		INC	\$\$EE
EFB2	A6 EE		LDX	\$\$EE
EFB4	A9 9	LEFB4	LDA	#\$09
EFB6	20 EB FB		JSR	\$\$FBEB
EFB9	CA		DEX	
EFBA	8A		TXA	
EFBB	D0 F7		BNE	LEFB4
EFBD	A9	LEFBD	LDA	#\$00
EFBF	85 1		STA	\$01
EFC1	68		PLA	
EFC2	A8		TAY	
EFC3	68		PLA	
EFC4	AA		TAX	
EFC5	4C 4A E5		JMP	\$\$E54A
EFC8	A9 1		LDA	#\$01
EFCA	4C DE EF		JMP	LEFDE
EFCD	A9 1A		LDA	#\$1A
EFCF	4C DE EF		JMP	LEFDE
efd2	A9 0A		LDA	#\$0A
efd4	4C DE EF		JMP	LEFDE
efd7	A9 9		LDA	#\$09
efd9	4C DE EF		JMP	LEFDE
efdc	A9 8		LDA	#\$08
efde	4C EB FB	LEFDE	JMP	\$\$FBEB
efe1	E6 E9	LEFE1	INC	\$\$E9
efe3	D0 2		BNE	LEFE7
efe5	E6 EA		INC	\$\$EA
efe7	60	LEFE7	RTS	
efe8	A5 E9	LEFE8	LDA	\$\$E9
efea	D0 2		BNE	LEFEE
efec	C6 EA		DEC	\$\$EA
efee	C6 E9	LEFEE	DEC	\$\$E9
eff0	60		RTS	
eff1	20 E2 0		JSR	\$\$00E2
eff4	20 29 CC		JSR	\$\$CC29
eff7	20 F5 D5		JSR	\$\$D5F5
effa	20 E8 EF		JSR	LEFE8
effd	6C 33 0		JMP	(\$0033)
			.END	

VDU Toolkit (PTL)