

PROGRAMMING GUIDE



TOTAL CONTROL 2.0 FLEX PROGRAMMING GUIDE





STEP 1. NAME & LOCATION

Step 1. Name & Location:

The following information must be completed in the software:

1. **Company Information:** Enter the **Company Name**, **Telephone**, and **Email** into the applicable field boxes.

This information is never visible to the end-user.

- 2. System Information: Enter the System Name, Primary Controller Location, and Primary Controller Type.
 - **Primary Controller Location:** The name entered here becomes the first zone on the Project Tree.
 - Primary Controller Type: Use the drop-down menu to select the applicable Primary Controller (MRX-30, MRX-15, etc.).
- 3. **Time and Date:** Use the drop-down menu to select a **Time Zone**. This information is used by the Primary Controller's astronomical clock.
- 4. Weather City: An Internet connection is required here, select Set to display the Choose a City for Weather data window.
 - a. Enter a **city name**.
 - b. Select Search.
 - c. Select a city from the populated list.
 - d. Select **Save**.

This location appears when using the **Weather Module** on supported interfaces (TKP-7600, TKP-5600, TDC-7100).





STEP 1. NAME & LOCATION

5. **Sunrise and Sunset:** The following section must be complete in order to configure the astronomical clock of the Primary Controller.

Use one of these three (3) methods:

- **City/Town & State:** Enter the City name and State information. Select **Enter** to confirm.
- **US Zip Code:** Enter the zip code and select Enter. This feature only works in the United States.
- **Coordinates:** Any project outside of the United States must utilize this option. Enter the coordinates of the job location and select Enter. This option is the most accurate.
- 6. Select Save to Project Tree.



Remember, the Primary Controller Location becomes the first zone added to the Total Control system.

System Information			
Company Information Company Name : URC Telephone : 9148354484 Email : elopez@universalremote.	System Information System Name : System Primary Controller Location Living Room Primary Controller Type : MRX-30 V	Time and Date Time Zone : (GMT-05:00) Eastern Time (US & Canada Weather City Harrison, New York Set 5 Weather data display requires at least one of the following models present in the system : THZ-100, TKP-7600, TKP-5600, TDC-7100	Sunrise and Sunset City/Town : Harrison State : (ex: 'NY", "CA") NY Enter OR enter the US zipcode : 10528 Enter OR enter the coordinates : Latitude : 40.972667 Longitude : -73.71886 Enter



STEP 2. ADD ZONES

Step 2. Add Zones:

Use this step to add additional zones to the Project Tree. Remember, a Total Control system supports up to thirty-two (32) zones.

Below are the following options available:

- **Commercial:** Displays all the **Commercial** zones available in the software (i.e. .Auditorium, Office, etc.).
- **Residential:** Displays all Residential zones available in the software (i.e. Living Room, Master Bedroom, etc.).
- **Import Zones:** Allows the programmer to import any zones that were Exported from a previous Total Control 2.0 Flex project.
- **Export Zones:** Allows the programmer to export all zones on the current project as a text (.txt) file. This file can be imported into any other project.
- **Replace Zones:** Allows the programmer to replace all the zones in the current projects with those of a previously exported text file.

dd Zones			
ercial Residential Import 2	ones Export Zones Re	place Zones	
Zone Names :	Commercial Room Name		
	Auditorium	Gym	Sauna
	Ballroom	Hot Tub	Sitting Area
	Bar	Indoor Pool	Sports Bar
	Basement	Jacuzzi	Steam Room
	Beer Garden	Kitchen	Temple
	Boardroom	Ladies's Room	Training Room
	Break Room	Lecture Hall	TV Room
	Cafe	Lobby	Upstairs
	Chapel	Locker Room	Waiting Room
	Class	Lunch Room	
	Classroom	Media Room	
	Conference Room	Meeting Room	
	Courtyard	Men's Room	
	Dance Floor	Office	
	Deck	Outdoor	
	Dining Room	Outdoor Pool	
	Downstairs	Outside	
	Entry	Patio	
	Exercise Room	Pool	
	Exhibit	Restaurant	
	Exit	Restroom	
	Fitness Studio	Retail	
	Front Desk	Sanctuary	

B



STEP 2. ADD ZONES

	Project Tree	Step 2 Add Zones				
	System	Commercial Residential Import Zo	ones Export Zones Re	place Zones		
	Master Bedroom	Too Too Name	Residential Room Name			
	Game Room	Cippe Zone Names :	1st Floor	Driveway	Master Bedroom	Studio
		Master Bedroom	2nd Floor	Exercise Room	Media Room	Study
			3rd Floor	Family Room	Mud Room	Sun Room
to add a zone:			4th Floor	Front Gate	Music Studio	Trophy Room
			Art Studio	Front Yard	Nursery	Veranda
Enter a name in this text box			Back Door	Game Room	2 Jursery 2	Walk In Closet
the keyboard.			Back Yard	Garage	Office	Walkway
			Bar	Garage 2	Outdoor	Wine Cellar
added to the Project Tree.			Basement	Gazebo	Outdoor Theater	Workout Room
			Bathroom	Great Room	Panic Room	Workshop
ble click on any available room			Beach	Guest Room	Pantry	Yoga Room
	▲		Bedroom	Home Theater	Parlor	
			Billiard Room	Hot Tub	Patio	
o the end of the Project Tree.			Blank	House	Patio 2	
			Boat	Kitchen	3 Playroom	
lect a room from the populated			Boat House	Lake	Pool	
he Project Tree.			Breakfast Nook	Landing	Pool House	
			Cabana	Laundry Room	Porch	
			Car Port	Listening Room	Powder Room	
			Dark Room	Living Room	RV	
			Deck	Loft	Sitting Room	
			Den	Marina	Spa	
			Dining Room	Master Bathroom	Stairs	

Adding Zones:

There are three (3) methods t

1. Type Zone Names: and select Enter on

The room entered is

2. Double-Click: Doub from the list.

This add that room to

3. Drag and Drop: Sele list and drop it into th



Step 3. Add URC Devices:

In this step, all participating URC devices are added to Project Tree. The software does not support any Legacy Total Control Products, nor can it utilize the TRC-1080 and/or the TRC-820.

There are three (3) methods to add a URC Device:

1. **Double-click:** Double-click on any URC device to display the properties window and add it to the Project Tree.

- 2. **Drag and Drop:** Select a URC device and drop it into the Project Tree. This displays the model properties window and adds the deice.
- 3. **Select Add to Zone:** Single-click on any URC device and select the Add to Zone button. This adds that device to the Project Tree.

Step 3 Add URC Devices - Living Room				
Add to Zone				
	Base Stations	Remotes/Keypads	DMS	Media Players
Current Zone :	MRX-2	TKP-7600	DMS-1200	PSX-2
Living Room	MRX-8	TKP-5600	DMS-100	SNP-2
	MRX-10	TDC-7100	DMS-IN	
Previous Next	MRX-30	Android Phone	DMS-OUT	
	MRX-15	Android Tablet		
	MRX-4SEN2	IPhoneV2		
	MRX-4IR	IPadV2		
	MFS-8			
	MFSPOE-8			
	TRF-ZW			



ADD URC DEVICES

STEP 3.

TOTAL CONTROL 2.0 FLEX

Interface Requirements:

Total Control Flex 2.0 does not auto-generate user interfaces for the programmer. Every interface in this system must be programmed manually.

Here are the windows that display when adding interfaces:

Keypads with Adjustable Orientations:

Remember, all keypads must be oriented from within the software:

- 1. Add a keypad (i.e. TKP-7600).
- 2. Select an orientation (Landscape or Portrait) and select OK.
- 3. Adjust the Model Properties window:
 - **Name:** Allows the programmer to rename the interface, this is not visible to the end-user.
 - **Theme:** Allows the programmer to select from one of URC's available themes (i.e. Standard Landscape).

Select the theme that **matches the orientation** of the device that has been added (i.e. landscape keypad - standard landscape theme)

• **Copy:** Allows the programmer to "copy" from an existing interface in the system (models must be the same i.e. copy a TKP-7600 to another TKP-7600).



Model Properti	es ,		_			⊂ Basic Inform Name	ation	0		×
CH+ CH+	•	•	11 >>	•	Button 1 Button 2 Button 3 Button 4	Option New : Copy :	Theme :	Standard La	andscape	•
Info Mute Do not show t		Playback	Controls	addec	Button 5 Button 6 Main (1)	4	OK		Cancel	

4. Select OK.

The URC device is now added to the Project Tree.

&U:*C*°

TOTAL CONTROL 2.0 FLEX

STEP 3. ADD URC DEVICES

Adding Standard URC Interfaces:

Interfaces that do not support adjustable orientations are added as follows:

- 1. Add the URC device (i.e. TDC-7100).
- 2. Adjust the Model Properties window:
 - **Name:** Allows the programmer to rename the interface, this is not visible to the end-user.
 - **Theme:** Allows the programmer to select from one of URC's available themes (i.e. Standard Landscape).
 - **Copy:** Allows the programmer to "copy" from an existing interface in the system (models must be the same i.e. copy a TKP-7600 to another TKP-7600).
- 3. Select OK.

The URC device is now added to the Project Tree.



						Maria	TDC-710	0	
ndard Dev	vice				_	Name	100-710	0	
					2	Option —		2	
H+			and a		Button 1	💿 New :	Theme :	Standard	-
	•				Button 2	Copu:			-
H-					Button 3	Copy.			
ev	144		**	H	Button 4				
fo					Button 5				
		Playback	Controls		Button 6				
Mu	te 🔶)		Ξ	Main 🕕				



STEP 3. ADD URC DEVICES

Adding URC Mobile Devices:

URC Mobile devices support Landscape and Portrait mode orientations. It must be noted in software which style is to be used. Follow these steps to add a URC Mobile device to the Project Tree:

- 1. Add a URC Mobile device (i.e. iPhoneV2, Android Phone, etc.).
- 2. Choose from Landscape, portrait, or both.

When **Both** is selected, the programmer is **REQUIRED** to create a landscape and portrait user interface separately.

Select OK.

- 3. Adjust the Model Properties window:
 - **Name:** Allows the programmer to rename the interface, this is not visible to the end-user.
 - **Theme:** Allows the programmer to select from one of URC's available themes (i.e. Standard Landscape, Standard Portrait, Standard Both).
 - **Copy:** Allows the programmer to "copy" from an existing interface in the system (models must be the same i.e. copy a TKP-7600 to another TKP-7600).



neme Preview -		Basic Information
	Standard Device	Name IPhoneV2
	0+ Prov #40	Option Option New : Theme : Standard Both
	• • • •	© Copy :
	144 44 >> >>	
	Phytesk Controls Button 1 Button 1 Sutton 9	
	Datan 4 Batten 5 Batten 6	

4. Select OK.



PROGRAMMING GUIDE

Step 4. Add Other Devices:

All non-URC devices like cable boxes, televisions, AVRs, etc. are added in this step. Each device is added as a driver and it is a best practice to create a personal database of drivers that are configured to the needs of the end-user.

There are two (2) different databases available:

• URC: Contains all the device located in URC's database. These drivers should be used as templates when creating personal drivers.

• My: Contains all the drivers created by the programmer. These files are contained in a default folder; however, they can be relocated to any folder on the programming computer.

Adding a Driver:

Follow these steps to add any driver from the "URC" or the "My" database:

- 1. Select Room: Use the **Previous** or **Next** buttons to cycle through the available rooms.
- 2. Select Database: Choose "URC" or "My".
- 3. **Select Module Type:** Use the drop-down menu to change the module type selection (i.e. IR, RS-232, IP, etc.).
- 4. Select Category: Use the drop-down menu to change the category selection (i.e. Audio, AUX, Cable, etc.).

	1.Select Room :	
1	Living Room	
	Previous Next	IR Database
	2.Select Database :	RS232 Database
2	● URC ◎ My	IP Database
	3 Select Module Type :	I wo-way/Advanced Modules
3	or second die Type i	IN O Devices for Network Conditis
Ч	IR Database *	
	4.Select Category :	AUDIO
4	CABLE	AUX
		CABLE
	For testing : Use PIR-1	CAMERA DVR
	CTest Through Base Station ————————————————————————————————————	CD
	TVPE I MDV 10	DVD
	MRX-10	DVR
	MAC : 00:00:00:00:00:00	LD
	IP: 0.0.0.0 Discover	PROJECTOR
	-Taraat	SAT
		SOLINDBAR
	IR Port ALL	TAPE
	Repeat: 3	TV
		VCR
		WEBTV



PROGRAMMING GUIDE

- 5. Select Brand: Choose a brand (i.e. AT&T, Verizon, etc.), this is loaded from the "URC" or the "My" database.
- 6. Select Model: Choose a model from the populated list.
- 7. **View Function List:** Provides a preview of the commands available to the selected model. It is possible to select a function for testing.
- 8. **Add Selected Modules:** Select this to add the selected driver to the Project Tree.

Step 4 Add Non-URC Devices - Living Ro				
Add Selected Modules	v Driver Test			
1.Select Room :	5.Select Brand :	6.Select Model :		7.View Function List
Living Room Previous Next 2.Select Database: URC 3.Select Module Type: IR Database 4.Select Category: CABLE For testing: Use PIR-1 TYPE: MRX-10 Use PIR-1 TYPE: MRX-10 IP: 0.0.0. Discover Target IR Port ALL	Cisco Comcast Motorola MOXI Pace Samsung SCIENTIFIC ATLANTA Verizon ABC ADB ADELPHIA ADVANCED NEWHOUSE ALTRIO AMERICAST Amino ANTRONIX ARCHER ARMSTRONG Arris ATLANTIC BROADBAND BELGACOMTV	Standard Database Models ATT 1 U-VERSE [AT <u>I</u> 1] [AT <u>I</u> 1]	6	Power POWER POWER POWER Volume/Mute Function VOL+ VOL- MUTE LAST CH+ CH+ CH- VOL+ VOL+ VOL+ VOL+ VOL- MUTE PTANSport Functions PLAY STOP PAUSE << >> >
Repeat : 3	Bell Fibe BELL SOUTH BLUE RIDGE			GUIDE



PROGRAMMING GUIDE

For Testing:

Through the Total Control Flex 2.0 software, it is possible to test almost any command from the View Function List window.

Use PIR-1:

Follow these steps when a PIR-1 is connected via USB to the computer:

- 1. Check the "Use PIR-1" box.
- 2. Select a command from the **Function List** section.
- 3. Select Test.

The IR data assigned to the function is transmitted through the PIR-1 for direct "**line-of-sight**" testing.

Add Selected Modules Create New Drive 1.Select Room : 5.Sele Living Room Cisco Comc. Description New Model	er Brand :	6.Select Model : Standard Database Models	7.View Function List
1.Select Room : 5.Sele Living Room Cisco Comc	ect Brand :	6.Select Model : Standard Database Models	7.View Function List Power POWER
Living Room Cisco Comco	cast rola I	Standard Database Models ATT 1 U-VERSE	Power POWER
Image: Construction of the state of the	PHIA PHIA ANCED NEWHOUSE IO RICAST o RONIX HER STRONG r INTIC BROADBAND ACOMTV ibe SOLITH	(ATI 1) [ATI 1]	POWER Volume/Mute Functions Vol.+ Vol MUTE LAST CHIPG- Vol.+ Vol.+ Vol.+ Vol.+ Vol.+ Vol.+ Vol MUTE Transport Functions PLAY STOP PAUSE REW FF Menu Functions



PROGRAMMING GUIDE

Test Through Base Station:

When a PIR-1 is not available or using RS-232/IP, this method is required:

- 1. **Type:** Use the drop-down menu to select the applicable **base station** (MRX-10, MRX-8, etc.).
- 2. Select **Discover**.

The software scans the network for available base stations, it only searches for the model selected from the **Type** drop-down menu.

- 3. **Choose** the appropriate **base station** from the Discover window and select **Apply**.
- 4. For IR:
 - IR Port: Designate which IR Port to test from, assure the device is connected to the port selected.
 - **Repeat:** Generally, this does not need to adjusted. Only adjust when instructed by URC Technical Support.

For RS-232:

- **Target:** Contains Serial Port, Baud Rate, Data, Parity, Stop, and Repeat. Except for the Serial Port, all other fields are automatically populated from the selected driver.
- Serial Port: The Programmer must dictate to the software which Serial Port to test from.



RS-232





PROGRAMMING GUIDE

For IP:

- **Target:** Contains the IP address, Port Number, and Repeat options. Except for IP, all other fields are automatically populated from the selected driver.
- **IP:** Enter the IP Address of the device being tested. IP Testing cannot occur if this field is left blank.

3

- 5. Select a command from the **View Function List** (i.e. Power).
- 6. Select Test.

Add Selected Modules Create New Driver 6 Add Selected Modules Create New Driver Test 1.Select Room : S.Select Brand : 6.Select Model : 7.View Function List Living Room Cisco Concast Motorola 9 9 Previous Next Occocast 1 9 9 2.Select Database : MOXI 9 9 9 9 9 9 3.Select Module Type : Pace 3 9 <th>Step 4 Add Non-URC Devices - Living R</th> <th>oom</th> <th></th> <th></th>	Step 4 Add Non-URC Devices - Living R	oom		
1.Select Room : 5.Select Brand : 6.Select Model : 7.View Function List Living Room Cisco Concast Motorola 9 Power Previous Next 0.Select Database : 5 9 Power 2.Select Database : MOXI 9 Pace 5 9 Power 3.Select Module Type : Pace 5 9 Volume/Mute Function IR Database ABC ADB ADELPHIA -VOL+ ADB ADELPHIA ADVANCED NEWHOUSE -VOL+ -CHIPG+ CABLE ADXINTRONIX ARCHER ADVANCED NEWHOUSE -VOL+ -VOL+ MAC : 00:1F:B8:2A:22:E1 ANTRONIX ARCHER ARMSTRONG -PLAY -STOP IP : 192.168.7.20 Discover AT&AT -FE -PLAY -STOP Target IR Port 1 V BLGACOMTV -REW -REW -REW	Add Selected Modules Create New	w Driver		
Living Room Cisco Previous Next 2.Select Database : MOXI 9 URC My 3.Select Module Type : Pace IR Database SciENTIFIC ATLANTA Verizon Volume/Mute Function ABC ADELPHIA ADELPHIA ADELPHIA ADVANCED NEWHOUSE ALTRIO AIT TYPE : MRX-10 MARC : 00:1F:88:2A:22:E1 IP : 192.168.7.20 Discover ATATI ATATATIONIX ARCHER ATTATIONIX ARCHER ATATATIONIX ARCHER ARCACOMTV ENDIFIESCAL	1.Select Room :	5.Select Brand :	6.Select Model :	7.View Function List
Repeat : 3 A Menu Functions	Living Room Previous Next 2.Select Database: URC My 3.Select Module Type: IR Database 4.Select Category: CABLE For testing: Use PIR-1 TYPE: MRX-10 VMAC: 00:1F:88:2A:22:E1 IP: 192.168.7.20 Discover Target IR Port I Pepeat: 3	Cisco Comcast Motorola MOXI Pace Samsung SCIENTIFIC ATLANTA Verizon ABC ADB ADELPHIA ADVANCED NEWHOUSE ALTRIO AMERICAST Amino ANTRONIX ARCHER ARMSTRONG Arris ATLANTIC BROADBAND BELGACOMTV Bell Fibe BELSACOMTV BELSA	Standard Database Models 5	Power POWER Volume/Mute Functions Volume/Mute Functions Vol+ Vol+ Kast CHIPG+ CHIPG+ CHIPG+ Vol+ Vol+ Vol+ Vol- MUTE Transport Functions PLAY STOP PAUSE REW FF Menu Functions

IP





PROGRAMMING GUIDE

Accelerator Driver Models **URC Database: Bold vs Standard:** STR-DA1800ES There are two (2) types of drivers available for devices that contain inputs and/or STR-DA2800ES STR-DA3500ES outputs (i.e. TVs, AVRs, Matrix Switchers, etc.). STR-DA3600ES STR-DA4400ES 1. Accelerator Driver Models (Bold): These types of drivers can be added STR-DA4600ES to the Project Tree without any customization. Keep in mind that without STR-DA5500ES proper customization, these drivers may lack the desired button layouts, STR-DA5600ES STR-DA5700ES device icon, and other parameters that can be configured by creating a STR-DA5800ES personal driver. STR-DA6400ES STR-DH100 It is a best practice to use these types of drivers as a template for creating a STR-DH520 custom driver. Custom drivers should ALWAYS be used in a successful STR-DH550 STR-DH720 Total Control Flex 2.0 system. STR-DH750 STR-DH820 2. Standard Database Driver: Should NEVER be added directly to the STR-DN850 Project Tree. These types of drivers lack the input and output assignments. STR-DN1020 STR-DN1040 STR-DN1050 Use these as custom driver templates only when an STR-DN2010 Accelerator Driver Model is not available. STR-ZA1000ES STR-ZA2000ES STR-ZA3000ES STR-ZA5000ES Standard Database Models DAV-FX10 [1] (RM-ADP002) DAV-FX10 [2] (RM-ADP002) DAV-FX100W [1] (RM-ADP002) 2 DAV-FX100W [2] (RM-ADP002) DAV-FX500 [1] (RM-ADP010) DAV-FX500 [2] (RM-ADP010) DAV-FX80 [1] (RM-ADP002) DAV-FX80 [2] (RM-ADP002)

4



PROGRAMMING GUIDE

Creating Custom Drivers:

Using custom drivers is the key to a successful Total Control system. Drivers can be created for IR, RS-232, and IP devices from within the software and saved onto the programming computer or placed on cloud storage service.

Due to the customizable nature of the Total Control Flex 2.0 software, there are a few options available that are not applicable. The following section covers all the areas required to create a driver for Flex:

1. Select an Flex Driver Model (Bold).

2. Select Create New Driver.

Module Type :	Category :
IR Database	AUDIO
Brand :	Model :
Denon	STR-DA4400ES
HARMAN KARDON	STR-DA4600ES
Marantz	STR-DA5500ES
Onkvo	STR-DA5600ES
Pioneer	STR-DA5700ES
Russound	STR-DA5800ES
SnapAV	STR-DA6400ES
Sony	STR-DH100
	STR-DH520
ACURUS	STR-DH550
ADA	STR-DH330
ADC	STR-0H720
Adcom	
	STR-0H620
AMC	STR-DN850
AMEND	STR-DN 1020
AMX	STR-DN 1040
ANGSTROM	STR-DN 1050
Antelope	STR-DN2010
	STR-ZA1000ES
ARAGON	STR-ZA2000ES
Arcam	STR-ZA3000ES

Step 4 Add Non-URC Devices - Living R			
Add Selected Modules Create Net	w Driver Test		
1.Select Room :	5.Select Brand :	6.Select Model :	7.View Function List
Living Room Previous Next 2.Select Database : URC My 3.Select Module Type : IR Database	Denon HARMAN KARDON Integra Marantz Onkyo Pioneer Russound SnapAV Sony	STR-ZA 1000ES STR-ZA 2000ES STR-ZA3000ES STR-ZA5000ES Standard Database Models DAV-FX10 [1] (RM-ADP002) DAV-FX10 [2] (RM-ADP002) DAV-FX10 [2] (RM-ADP002)	Power Power On Power Off Power Volume/Mute Functions Vol+ Vol- Vol-
4.Select Category :	Yamaha	DAV-FX100W [1] (RM-ADP002)	Mute V-L
AUDIO For testing: Use PIR-1 Test Through Base Station TYPE: MRX-10 MAC: 00:1F:B8:2A:23:6C IP: 192.168.24.2 Discover Target IR Port ALL	ACURUS ADA ADC Adcom AIWA AKAI AMC AMEND AMX ANGSTROM Antelope ANTEX ELECTRONICS Anthem	DAV-FX500 [1] (RM-ADP010) DAV-FX500 [2] (RM-ADP010) DAV-FX500 [2] (RM-ADP010) DAV-FX80 [2] (RM-ADP002) DAV-FX900W [2] (RM-ADP010) DAV-FX900W [2] (RM-ADP010) DAV-HDX277VWC (RM-ADU007) DAV-HDX277WC (RM-ADU007) DAV-HDX277WC (RM-ADU007) DAV-HDX276WF (RM-ADU007)	···Vol- ····Mute ····AUX ····TV ····SA-CD/CD ····Band ····FM ····BD/DVD ····SAT/CATV
Repeat : 3	ARAGON	DAV-HDZ273 (RM-ADU007)	Game STB

3. Click on Select This Device.



PROGRAMMING GUIDE

4. **Brand:** If a Flex Driver Model was used as a template, this section is automatically populated.

When creating a brand new driver (No Flex Driver Model used as template), enter a Brand name.

The **Brand** name entered here dictates where this driver is located in the "**My**" database.

- 5. **Models:** If an Flex Driver Model was used as a template, this section is automatically populated.
 - Add: Select to add additional models to this list. It is a best practice to add all devices compatible with this driver to this list.
 - Delete: Select to remove a model from this list.
- 6. **Device Type Category:** If an Flex Driver Model was used as a template, this section is automatically populated.

When creating a brand new driver (No Flex Driver Model used as template), use the drop-down menu to select a Category.

The **Category** type selected here dictates where this driver is located in the "**My**" database.

empiate),	Device Driver Edit					
	New Open Save Save As	Edit Information Edit Functions				
in the	Driver Information		Driver Properties			
	Brand :		- Outputs		- 2-Way (/ED)	
(4)	Sony		Main		2-way (vr 0)]
–			Zone 2	Edit		
	Models : Add Delete		Zone 3	Add		Select Module
on is 🚽	STR-ZA3000ES			Delete		Info
5			Volume Popup : Disabled]		
I			Power Management & Macro	o Delay		
			Power On Delay (sec)	1	~	
ctice to 6	Device Type Category :	Default Sub-Menu :	Power Off Delay (sec)	0.1	*	
<u> </u>	AUDIO	Entertainment *	Macro Interstep Delay (se	c) 0.1	-	
	Control Types : Edit	AUDIO	log/Digital Input		-Built-In Sources -	
	IR	AUTOMATION SERVICE	the inputs that will be u	sed with the	List the inputs th	at will be used for the
		AUX	rice. They will be added	to the main	sources that are will be added to	built into this device. They the main and zone function
		CABLE			lists, and an inde	pentent function list for
I		Camera DVR			created.	int in source will also be
plate,	Device Lawsut and Sums Association Or	CD	/DVD	Edit	Tuner	Edit
	Device Layout and Sync Acceleration Op	DOOR STATION	me T/CATV		FM AM	
	Change the default settings for how A	DVD	teo			
	generate this device's user interfaces. which layouts are generated and which	DVR		·		
	un-synced.	LICHT				
mplate), 📗		MATRIX SWITCHES	levice is an AV Source or	r Switcher :	Yes	
		PROJECTOR				
		SAT				
		SOUNDBAR				
1.1		TAPE				
ed in the		TV				
		VCR				
		WEBTV				



PROGRAMMING GUIDE

- 7. **Control Types:** Select Edit to add additional control types to the current driver. Below are the different control types:
 - Normal Device Module: Add IR, IP, and/or RS232 Commands
 - No Commands: Used for sensors or other devices that need a place holder in the Total Control Flex 2.0 software.
 - Two-way/Advanced Module Only: Only for use for certified 3rd Party Developers creating a two-way module.

Edit Control Types

Support Types

IR Commands

IP Commands

RS232 Commande

Two-way/Advanced Module Only

Cancel

OK

Select **Ok**.

- Project Tree Name (Button Name): Label 8. entered here always displays on the Project Tree whenever this drier is added.
- Outputs: If an Flex Driver Model was used as 9 a template, this section is automatically populated. Below are the selectable options:
 - Edit: Allows the programmer to change the name of a listed Output/Zone.
 - Add: Allows the programmer to add an Output/Zone to the list.
 - Delete: Removes the selected Output/Zone from the list.





PROGRAMMING GUIDE

- 10. **Power Management & Macro Delay:** The values entered here affect system commands such as Device Power Macros and Smart Delays.
 - Power On Delay: Adjusts the delay when powering on a device. This
 is the perfect solution to combat TV/Projector warm-up, designate the
 amount of seconds the device needs to wait before able to accept
 another command.
 - **Power Off Delay:** Adjust the delay when powering off a device. This pauses any macro actions until after the delay time defined in this section. Generally, this settings is used for certain Projectors.
 - **Macro Interstep Delay:** Adjust the delay of commands from within a macro. This setting affect the device when receiving sequential commands from a macro. Change this value to increase or decrease the amount of time it takes for a macro to send another command to the same device.
- 11. **Analog/Digital Input:** Select the **Edit** button to add or remove an Analog and/or Digital Input (HDMI 1, COAX, etc.) to the list.
- 12. **Built-In Source:** Select the Edit button to add or remove a Built-In source to the list (i.e. Netflix, Amazon Video, etc.).
- 13. **This Device is an AV Source or Switcher:** Check this box if the device is an AV source or a device involved in input switching.

lew Open Save Save As Edit Information Edit Functions		
iver Information	Driver Properties	
Brand :	Coutputs	2-way (VFD)
Sony	Zone 1 Edit	
Models : Add Delete	Zone 2 Zone 3 Add	Select Module
STDZA 3000ES	Delete	Info
ans provide		
	Volume Popup : Disabled	
	- Power Management & Marro Delay	
	Power On Delay (sec)	
Device Type Category : Default Sub-Menu :	1	
AUDIO Tentertainment	Power Off Delay (sec) 0.1	
	Macro Interstep Delay (sec) 0.1	*
Control Types : Edit Project Tree Name (Button Name) :	- Analog Digital Joput	Duit to Sources
IR Audio	List the inputs that will be used with the	List the inputs that will be used for the
	device. They will be added to the main	sources that are built into this device. The
Icon : Edit	and zone function lists.	lists, and an indepentent function list for
		controling the built in source will also be created.
	BD/DVD Edit	Tuner Edit
Device Layout and Sync Acceleration Option	Game	FM
Change the default settings for how Accelerator will Edit	Video 11	(12)
generate this device's user interfaces. You can adjust which layouts are generated and which will be synced or		
un-synced.		



Edit Functions:

- 1. **Default Repeat Value:** The information here is provided by the manufacturer. Only make changes when instructed by URC Technical Support.
- 2. **Function List:** Below are descriptions of the areas that are applicable to a Total Control Flex 2.0 system:
 - **Function Display Name:** This label is how the function is displayed when dragged on to an button.
 - **Description:** When replacing a current function with a command from the IR, IP, or RS232 Navigator, this field describes what code was used.
 - **Function Data:** Displays the command type assigned to a function. When this field is blank, a function has not been assigned a command.
 - **Custom Option:** Allows the programmer to adjust individual command repeat settings. Generally, this does not need to be changed unless instructed by URC Technical Support.
 - Add Function: Select to add a blank function to the list.
 - Edit Function: Allows the programmer to adjust the functions's repeat settings and provides the option to **Override Button with Macro Commands**. When using IP and/or RS232, this button allows the programmer to edit the command string.
 - Delete Function: Removes a command from the Function List.
 - Test Function: Select this after choosing a function to test it.

	e Driver Edit							x
New	Open Save	Save As Edit Informa	ation Edit Functions					
IR								
-Default	Repeat Value		For testing	(a) (a)	9 00			[00]
Delourt	Repeat value		For testing	Learn Learn Next	1 Time Learn 2-Times	Learn IR Na	Linator	Liniversal Browser
Repeat	t:	3 🗘	Sest Through Base Station	Use PIR-1	T-Thire Learning 2-mines	Lediti increa	ivigato.	Universal browser
Minimu	m Repeat When Pres	ssed : 3 🚔	VPF : MRX-10					
	in respect to the second		IFE . MRA-10					
Ret	eat while button is n	ressed	MAC : 00:00:00:00:00:00	00				
	COL MINE DOLLAR D	Cosco	IP: 0.0.0.0 Dis	scover				
			Tourst					
			TR Port					
			IR PORT ALL					
			Repeat: 3	÷				
Function L	ist Zone 1					Special C	Options	
Function L Show	ist Zone 1 Button ID	Function Display Name	- Description	Function Data	Custom Option	Special C Quickbar	Options	
Function L Show	ist Zone 1 Button ID POWER ON	Function Display Name Power On	* Description	Function Data	Custom Option Repeat, 1	Special C Quid/bar	Options	
Function L Show	ist Zone 1 Button ID POWER ON POWER OFF	Function Display Name Power On Power Off	Description	Function Data IR IR	Custom Option Repeat, 1 Repeat, 1	Special C Quickbar	Options	
Function L Show	ist Zone 1 Button ID POWER ON POWER OFF POWER (Toggle)	Function Display Name Power On Power Off POWER		Function Data IR IR	Custom Option Repeat, 1 Repeat, 1 Default	Special C Quickbar	Options	Add Function
Function L Show	Jst Zone 1 Button ID POWER ON POWER OFF POWER (Toggle) VOLUME +	Function Display Name Power On Power Off POWER Vol+	Pescription	Function Data IR IR	Custom Option Repeat, 1 Repeat, 1 Default Repeat, 1	Special C Quickbar	Options	Add Function
Function L Show	ist Zone 1 Button ID POWER ON POWER (Toggle) VOLUME + VOLUME -	Function Display Name Power On Power Off POWER Vol+ Vol+	Description	Function Data IR IR IR IR	Custom Option Repeat, 1 Repeat, 1 Default Repeat, 1 Repeat, 1	Spedal C Quidbar	Options	Add Function Edit Function
Function L Show	ist Zone 1 Button ID POWER ON POWER (Toggle) VOLUME + VOLUME - MUTE ON	Function Display Name Power On POWER Vol+ Vol+ MUTE ON	Description	Function Data IR IR IR IR IR	Custom Option Repeat, 1 Default Repeat, 1 Repeat, 1 Default	Special C Quickbar	Diptions	Add Function Edit Function Delete Function
Function L Show S S S S S S S S S S S S S S S S S S S	list Zone 1 Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE ON MUTE OFF	Function Display Name Power On Power Off POWER Vol+ Vol+ Vol- MUTE ON MUTE OFF	* Description	Function Data IR IR IR IR	Custom Option Repeat, 1 Default Repeat, 1 Repeat, 1 Default Default	Special C Quickbar	Diptions	Add Function Edit Function Delete Function
Function I Show	List Zone 1 POWER ON POWER (Toggle) VOLUME + VOLUME - MUTE OFF MUTE (Toggle)	Function Display Name Power On Power Off POWER Vol+ Vol- MUTE ON MUTE OFF Mute	Description	Function Data IR IR IR IR	Custom Option Repeat, 1 Repeat, 1 Default Repeat, 1 Default Default Repeat, 1	Spedal C Quidbar	Deptions	Add Function Edit Function Delete Function Reorder Functions
Function I Show	List Zone 1 Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE ON MUTE ON MUTE (Toggle) INPUT	Function Display Name Power On POWER Vol+ Vol- MUTE ON MUTE OFF Mute BD/DVD	Description	Function Data IR IR IR IR IR IR IR IR	Custom Option Repeat, 1 Default Repeat, 1 Default Default Default Repeat, 1 Repeat, 1	Special C Quidbar	Detions	Add Function Edit Function Delete Function Reorder Functions
Function I Show	List Zone 1 Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME + VOLUME - MUTE ON MUTE OFF MUTE (Toggle) INPUT INPUT	Function Display Name Power On Power Off POWER Vol+ Vol+ MUTE ON MUTE ON MUTE OFF Mute BD/DVD Game	Description	Function Data IR	Custom Option Repeat, 1 Default Repeat, 1 Default Default Default Default Repeat, 1 Repeat, 1 Repeat, 1	Special C Quidbar	Diptions	Add Function Edit Function Delete Function Reorder Functions Test Function
Function I Show	List Zone 1 Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE OFF MUTE OFF MUTE (Toggle) INPUT INPUT INPUT INPUT	Function Display Name Power On Power Off POWER Vol+ Vol- MUTE ON MUTE OFF Mute BD/DVD Game SAT/CATV	Description	Function Data IR	Custom Option Repeat, 1 Default Repeat, 1 Default Default Default Repeat, 1 Repeat, 1 Repeat, 1 Repeat, 1	Quidbar	Options	Add Function Edit Function Delete Function Reorder Functions Test Function
Function I Show	List Zone 1 POWER ON POWER (Toggle) VOLUME + VOLUME - MUTE (Orggle) INPUT INPUT INPUT INPUT INPUT INPUT	Function Display Name Power On POWER Vol+ Vol- MUTE OFF Mute B0/DVD Game SAT/CATV Video	Description	Function Data IR	Custom Option Repeat, 1 Repeat, 1 Default Repeat, 1 Default Default Repeat, 1 Repeat, 1 Repeat, 1 Repeat, 1 Repeat, 1	Special C Quidtbar	Deptions	Add Function Edit Function Delete Function Reorder Functions Test Function

PROGRAMMING GUIDE

19



PROGRAMMING GUIDE

3. For Testing: When a PIR-1 is available, check the box at the left of Use PIR-1. Choose a function and select **Test Function** to send the IR data.

Follow the steps on page 12 for details on discovering the base station and assigning and IR port.

- 4. **Learn:** A **PIR-1 is REQUIRED** to learn commands from a factory remote. Select an existing or a new function command to learn on:
 - Learn: Select when ready to learn onto an existing function (overwrites current data) or on a new function.
 - Learn Next: Makes the software automatically move on to the next function after a function is learned. This is designed to speedup the learning process..
 - **1-Time Learn:** Select to learn a command from factory remote. This is the most commonly used option.
 - 2-Times Learn: Used with IR devices that require an extra piece of IR data to execute a command. Generally if 1-Time Learn does not work, this option is selected.
- 5. **IR Navigator:** Select this to display the IR Navigator. Choose from any code in the URC Database to add to the driver's function list.
 - **Save All:** Select to apply all codes to the Function List. If codes already exist, this process can overwrite that data.





PROGRAMMING GUIDE

- 6. **Universal Browser:** In situations where URC does not have a code in its database and the factory remote is not available, the Hex Editor can be utilized. Select Universal Browser.
 - Hex Editor: Only supports pronto hex, enter data in the filed box and click-and-drag the Drag button over a command on the Function List.

Hex data overwrites any pre-existing function.

7. Save the driver using Save or Save As.

New	Open Save	Save As	ation Edit Functions	-		
Default F Repeat Minimun	Repeat Value	sed : 3 * ressed	For testing Test Through Base Station TYPE : MRX-10 MAC : 00:00:00:00:00:00 IP : 0.0.0 De Target IR Port ALL Repeat : 3	Use PIR-1	Iteam Learn Next Iteam Learn Iteam Learn<	ser
unction L	ist Zone 1		*			
Chau	Putter ID	Eustice Display Name	Description	Eurotion		
Show	Button ID	Function Display Name	Description	Function	C Action List:	
Show	Button ID POWER ON	Function Display Name Power On	Description	Function I	D Action List:	
Show	Button ID POWER ON POWER OFF	Function Display Name Power On Power Off	Description	Function I IR IR	D Action List:	
Show	Button ID POWER ON POWER OFF POWER (Toggle)	Function Display Name Power On Power Off POWER Vol+	Description	Function I IR IR	C Action List:	
Show	Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME -	Function Display Name Power On Power Off POWER Vol+ Vol-	Description	Function I IR IR IR IR	C Action List:	
Show	Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MITTE ON	Function Display Name Power On Power Off POWER Vol+ Vol+ Vol-	Description	Function I IR IR IR IR IR	C Action List:	c
Show	Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE ON MUTE OFF	Function Display Name Power On Power Off POWER Vol+ Vol+ Vol- MUTE ON MUTE ON	Description	Function I IR IR IR IR	Action List:	n
Show	Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE OFF MUTE OFF MUTE (Toggle)	Function Display Name Power On POWER Vol+ Vol- MUTE ON MUTE OFF Mute	Description	Function I IR IR IR IR	Action List:	n 10
Show	Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE ON MUTE OFF MUTE (Toggle) INPLIT	Function Display Name Power On POWER Vol+ Vol+ MUTE ON MUTE ON MUTE OFF Mute BD/DVD	Description	Function I IR IR IR IR IR IR	Action List:	c (2)
Show	Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME + VOLUME - MUTE ON MUTE ON MUTE OFF MUTE (Toggle) INPUT INPUT	Function Display Name Power On Power Off POWER Vol+ Vol- MUTE ON MUTE OFF Mute BD/DVD Same	Description	Function I IR IR IR IR IR IR IR	Action List:	0
show Show Show Show Show Show Show Show S	Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + MUTE OFF MUTE (Toggle) INPUT INPUT INPUT	Function Display Name Power On Power Off POWER Vol+ Vol- MUTE ON MUTE OFF Mute BD/DVD Game Sat/Caty	Description	Function I IR IR IR IR IR IR IR IR IR IR	Action List:	c (2)
show Show Show Show Show Show Show Show S	Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE ON MUTE OFF MUTE (Toggle) INPUT INPUT INPUT INPUT	Function Display Name Power On Power Off POWER Val+ Val- MuTE ON MUTE OFF Mute BD/DVD Game SAT/CATV Video	Description	Function I IR IR IR IR IR IR IR IR IR IR	Action List: Hex Editor X Bill Drag 0890 0060 0022 0802 0155 00AA 0015 0040 0015 0040 0040 0015 0040 0015 0040 0015 0040 0015 0040 0015 0040 0015 0040 0015 0040 0015 0040 0015 0040 0015 0040 0015 0040	0



PROGRAMMING GUIDE

Creating IP Drivers:

The process of creating IP drivers is very similar to that of creating IR and/or RS-232. For specific details on customizing the **Edit Information** tab, refer to page 17.

In this section, the differences are detailed from the Edit Functions tab:

1. **Driver Information:** When an Accelerator Driver Model (Bold) was used as a template, this information is automatically populated and does not need to be adjusted.

When creating a brand new IP driver, refer to the device's protocol sheet for the specific communication parameters.

If the protocol specifies to use a Carriage Return, check the box at the left of **Terminate with carriage return**.

- 2. **Function Data:** Unlike IR, the ASCII, HEX, or Decimal string is visible in the provided field. These can be modified if need be.
- 3. **IP Navigator:** Just like the IR Navigator, allows the programmer to navigate through all IP codes in the URC Database. Select codes and add them to the Function List as needed.
 - **Save All:** Select to apply all codes to the Function List. If codes already exist, this process can overwrite that data.

Devio	e Driver Edit							×
New	Open Save	Save As	ation Edit Functions		_		-	
IP								
Driver I Data E Netwo Port: Delay a Pream	nformation ASCI ncryption: ASCI 7CP 3333 after opening a sock ole string: ator string:	I * * * * * * * * * * * * * * * * * * *	Default Repeat Value — Repeat : Minimum Repeat When P Depeat while button i Ramp Time Ramp Start : 10 Brane Stand : 10	ressed : 1 * s pressed x 10)msec x 10)msec	ugh Base Station MRX-10 00:00:00:00:00:00 0.0.0.0 Disc 0.0.0.0 1	3 vver	1P Naviga	tor
Ter	minate with carriage	return		Wait(msec)	: 0			
Function I Show	ist Main	return Function Display Name	rescription	Eurotion Data	: 0	Special Ouidbar	Options	
Function I Show	ist Main Button ID POWER ON	Function Display Name	Description	Function Data	: 0 Custom Option	Special Quiddbar	Options	
Function I Show	Ist Main Button ID POWER ON POWER OFF	Function Display Name Power On Power Off	Camp Speed - 10	Function Data ["type":"set", "feature": "main.power ["type":"set", "feature": "main.power	Custom Option NO Repeat, 1 NO Repeat, 1	Special Quickbar	Options	
Function I Show	Ist Main Button ID POWER ON POWER OFF POWER (Toggle)	Function Display Name Power On Power Off POWER	Description	Function Data ("type": "set", "feature": "main.power ("type": "set", "feature": "main.power	Custom Option NO Repeat, 1 NO Repeat, 1 Default	Special Quickbar	Options	Add Function
Function I Show	Ist Main Button ID POWER ON POWER ON POWER (Toggle) VOLUME +	Function Display Name Power On Power Off POWER Vol+	Description	Function Data ('type':'set', 'feature': 'main.power ('type':'set', 'feature': 'main.power ('type':'set', 'feature': 'main.power	Custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1	Special Quidkbar	Options	Add Function
Function I Show	Ist Main Button ID POWER ON POWER OFF POWER (Foggle) VOLUME + VOLUME +	Function Display Name Power On Power Off POWER Vol+ Vol-	temp speed - 10	Function Data ('type':'set', 'feature': 'main.power ('type':'set', 'feature': 'main.volum ('type':'set', 'feature': 'main.volum	Custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 Repeat, 1	Special Quidkbar	Options	Add Function Edit Function
Function I Show	Ist Main Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME + VOLUME - NUTE ON	Function Display Name Power On POWER Vol+ Vol+ Vol- Mute On	testing speed . 10	Function Data ('type':'set', 'feature': 'main.power ('type':'set', 'feature': 'main.volum ('type':'set', 'feature': 'main.volum ('type':'set', 'feature': 'main.wolum	Custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 Repeat, 1 NO Repeat, 1	Special Quidkbar	Options	Add Function Edit Function Delete Function
Function I Show	Ist Main Button ID POWER ON POWER OFF POWER (roggle) VOLUME + VOLUME - MUTE ON MUTE OFF	Function Display Name Power On Power Off POWER Vol+ Vol- Mute On Mute Off	Description	Function Data ("type":"set", "feature": "main.power ("type":"set", "feature": "main.yolum ("type": "set", "feature": "main.volum ("type": "set", "feature": "main.nute", ("type": "set", "feature": "main.mute", ("type": "set", "feature": "main.mute",	Custom Option NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 Repeat, 1 Repeat, 1 NO Repeat, 1 NO Repeat, 1	Special Quickbar	Options	Add Function Edit Function Delete Function
Function I Show	Ist Main Button ID POWER ON POWER ON POWER OFF POWER (Toggle) VOLUME - MUTE COFF MUTE COFF MUTE COFF MUTE COFF	return Function Display Name Power On Power Off POWER Vol+ Vol- Mute On Mute Off MUTE	Description	Function Data (type':'set', 'feature': 'main.your (type':'set', 'feature': 'main.your (type':'set', 'feature': 'main.volum (type':'set', 'feature': 'main.mute', (type':'set', 'feature': 'main.mute', (type':'set', 'feature': 'main.mute', (type':'set', 'feature': 'main.mute', (type:'set', 'feature': 'main.mute',)	Custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 Default	\$ Special Quickbar	Options	Add Function Edit Function Delete Function Reorder Functions
Function I Show	Ist Main Button ID POWER ON POWER ON POWER (Toggle) VOLUME - WUTE ON MUTE ON MUTE COFF INFUT	Power On Power On POWER Vol+ Vol- Mute On Mute Off MUTE BD/DVD	× Description	Function Data ('type':'set', 'feature': 'main.power ('type':'set', 'feature': 'main.volum ('type':'set', 'feature': 'main.volum ('type':'set', 'feature': 'main.nute', ('type':'set', 'feature': 'main.nute', ('type':'set', 'feature': 'main.nute', ('type':'set', 'feature': 'main.nute',	Custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1	Special Quidkbar	Options	Add Function Edit Function Delete Function Reorder Functions
Eunction I Show	Ist Main Button ID POWER ON POWER OFF POWER (Troggle) VOLUME + VOLUME - MUTE OFF MUTE (Troggle) INPUT INPUT	Power On Power On Power Off POWER Vol+ Vol+ Wute On Mute Off MUTE BD/DVD Game	Lorent Lore	Function Data ("type":"set", "feature": "main.power ("type":"set", "feature": "main.power ("type":"set", "feature": "main.volum ("type":"set", "feature": "main.nute", ("type":"set", "feature": "main.mute", ("type": set", "feature": "main.mute", ("type": set", "feature": "main.mute", ("type": set", "feature": "main.mute", ("type": set", "feature": "main.mute", ("type": "set", "feature": "main.input", ("type": "set", "feature": "main.input", ("type": "set", "feature": "main.input", ("type": "set", "feature": "main.input",	Custom Option NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1	Special Quickbar	Options	Add Function Edit Function Delete Function Reorder Functions
Function I Show	Ist Main Button ID POWER ON POWER ON POWER CON POWER CON POWER (Toggle) VOLUME + VOLUME - MUTE COFF MUTE COFF MUTE (Toggle) INPUT INPUT INPUT	Power On Power On Power Off POWER Vol+ Vol- Mute On Mute Off MUTE BD/DVD Game SAT/CATV	Description	Function Data (type":"set", "feature": "main.npower (type":"set", "feature": "main.volum (type":"set", "feature": "main.volum (type":"set", "feature": "main.nute", (type:"set", "feature": "main.nute",	Custom Option NO Repeat, 1	Special Quidbar	Options	Add Function Edit Function Delete Function Reorder Functions Test Function
Ter	Ist Main Button ID POWER ON POWER ON POWER (Toggle) VOLUME + VOLUME + VOLUME + MUTE ON MUTE CFF MUTE (Toggle) INPUT INPUT INPUT	return Function Display Name Power On Power Off POWER Vol+ Vol- Mute On Mute Off MUTE BD/DVD Game SAT/CATV Video	La La	Function Data ['type':'set', 'feature': 'main.power ['type':'set', 'feature': 'main.volum ['type':'set', 'feature': 'main.volum ['type':'set', 'feature': 'main.nute', ['type':'set', 'feature': 'main.input',	Custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 Repeat, 1 NO Repeat, 1	Special Quidbar	Options	Add Function Edit Function Delete Function Reorder Functions Test Function



PROGRAMMING GUIDE

Creating RS-232 Drivers:

The process of creating IP drivers is very similar to that of creating IR and/or IP. For specific details on customizing the **Edit Information** tab, please refer to page 17.

In this section, the differences are detailed from the Edit Functions tab:

1. **Driver Information:** When an Accelerator Driver Model (Bold) was used as a template, this information is automatically populated and does not need to be adjusted.

When creating a brand new RS-232 driver, refer to the device's protocol sheet for the specific communication parameters.

If the protocol specifies to use a Carriage Return, check the box at the left of **Terminate with carriage return**.

- 2. **Function Data:** Unlike IR, the ASCII, HEX, or Decimal string is visible in the provided field. These can be modified if need be.
- 3. **RS-232 Navigator:** Just like the IR Navigator, allows the programmer to navigate through all RS-232 codes in the URC Database. Select codes and add them to the Function List as needed.
 - **Save All:** Select to apply all codes to the Function List. If codes already exist, this process can overwrite that data.

Devio	e Driver Edit						
New	Open Save	Save As Edit Informa	ation Edit Functions				
S232							
-Driver I Baud R Data Parity Stop Data E	nformation late 960 8 Nor 1 ncryption: ASC	00 ×	Default Repeat Value Repeat : Minimum Repeat Whe Depeat while butt Ramp Time Ramp Start : 11 Ramp Start : 11	n Pressed : 1 * on is pressed x 10)msec x 10)msec x 10)msec	g rough Base Station : MRX-10 00:00:00:00:00:00 0.0.0.0 Disc Port 1 at: 1	3 Ser	ial Naviga pr
Ter	ist Main	i com		Wait(ms	ec) : 0	Special Opt	tions
Unction I	ist Main	Function Display Name		Function Data	ec): 0	Special Opt	tions
Function I Show	List Main Button ID POWER ON POWER OFF	Function Display Name Power On Power Off	Description	Function Data	custom Option NO Repeat, 1 NO Repeat, 1	Special Opt	tions
Eunction I Show	List Main Button ID POWER ON POWER OFF POWER OFF POWER (Toggle)	Function Display Name Power On Power Off POWER	Description	Function Data V02\x04\xA0^\x00\x01\xFB \x02\x04\xA0^\x00\x00\xFC	ec): 0 Custom Option NO Repeat, 1 NO Repeat, 1 Default	Special Opt	Add Function
Function I Show	Ist Main Button ID POWER ON POWER OFF POWER (Toggle) VOLUME +	Function Display Name Power On Power Off POWER Vol+	* Description	Function Data (x02/x04/xA0 ⁻ /x00/x01/xFB (x02/x04/xA0 ⁻ /x00/x00/xFC (x02/x03/xA01/x00/x08	custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1	Special Opt	Add Function Edit Function
Function I Show	list Main Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME -	Function Display Name Power On Power Off POWER Vol+ Vol+	Description	Function Data Vx02/x04/xA0 ' xx00/x01/xFB 1x02/x04/xA0 ' xx00/x00/xFC 1x02/x03/xA0U/xx00/x08 1x02/x03/xA0U/xx00/x07	custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 Repeat, 1	Special Opt	Add Function Edit Function
Eunction I Show	Ist Main Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME + WOLT ON	Function Display Name Power On POWER Vol+ Vol- Mute On	Description	Function Data Wait(ms \v02\v04\vA0`\v00\v01\vFB \v02\v04\vA0`\v00\v00\vFC \v02\v03\vA0\\v00\v00\v7 \v02\v03\vA0\\v00\v00\v7 \v02\v03\vA0\v00\v00\v7 \v02\v03\vA0\v00\v7 \v02\v04\vA0\v00\v00\v7 \v02\v04\v40\v00\v7	custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 Repeat, 1 NO Repeat, 1 Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 Repeat, 1 NO Repeat, 1 NO Repeat, 1 Repeat, 1 NO Repeat, 1 Repeat, 1 NO Repeat, 1	Special Opt Quiddbar	Add Function Edit Function Delete Function
Eunction I Show	Ist Main Utton ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE ON MUTE ON	Function Display Name Power On Power Off POWER Vol+ Vol- Mute On Mute Off	Description	Function Data V02\x04\xA0`\x00\x01\xFB \x02\x04\xA0`\x00\x00\xFC \x02\x04\xA0`\x00\x00\xFC \x02\x03\xA0\x00\x00 \x02\x04\xA0\x00\x00 \x02\x04\xA0\x00\x00 \x02\x04\xA0\x00\x00 \x02\x04\xA0\x00\x00 \x02\x04\xA0\x00\x00 \x02\x04\xA0\x00\x00 \x02\x04\xA0\x00\x00 \x02\x04\x04\x00\x00 \x02\x04\x04\x00\x00 \x02\x04\x04\x00\x00 \x02\x04\x04\x04\x00 \x02\x04\x04\x04\x00 \x02\x04\x04\x04\x04\x00 \x02\x04\x04\x04\x04\x04 \x02\x04\x04\x04\x04\x00 \x02\x04\x04\x04\x04 \x02\x04\x04\x04\x04\x04 \x02\x04\x04\x04 \x02\x04\x04\x04 \x02\x04\x04\x04 \x02\x04\x04\x04 \x02\x04\x04 \x02\x04\x04 \x02\x04\x04 \x02\x04 \x02\x04\x04 \x02\x04 \x02\x04 \x02\x04 \x02\x04 \x02\x04 \x02\x04 \x02\x04 \x02\x04 \x02\x04 \x02\x04 \x02\x04 \x02\x04 \x0	custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 NO Repeat, 1	Special Opt	Add Function Edit Function Delete Function
Function I Show	Ist Main Button ID POWER OF POWER (Toggle) VOLUME + VOLUME - MUTE (Toggle) MUTE (Toggle)	Function Display Name Power On Power Off POWER Vol+ Vol- Mute Off Mute	Description	Function Data Wait(ms Vx02/x04/xA0*/x00/x01/xFB xx02/x04/xA0*/x00/x01/xFE xx02/x04/xA0*/x00/x00/xFC xx02/x03/xA0/x00/x08 xx02/x04/xA0*/x00/x00 xx02/x03/xA0/x00/x07 xx02/x04/xA0*/x00/x00 xx02/x04/xA0*/x00/x07 xx02/x04/xA0*/x00/x00/x07 xx02/x04/xA0*/x00/x00 xx02/x04/xA0*/x00/x00/x09 xx02/x04/xA0*/x00/x09	custom Option Custom Option NO Repeat, 1 NO Repeat, 1 Repeat, 1 Repeat, 1 NO Repeat, 1 NO Repeat	Special Opt	Add Function Edit Function Delete Function Reorder Functions
Function I Show	ist Main Button ID POWER ON POWER ON POWER (Toggle) VOLUME - MUTE ON MUTE CFF MUTE (Toggle) INPUT INPUT	Function Display Name Power On Power Off POWER Vol+ Vol- Mute On Mute Off CD	Description	Function Data Wait(ms) Vx02lyt04lytA0* Vx00lyt01lytFB Vx02lyt04lytA0* Vx00lyt00lytFC Vx02lyt04lytA0* Vx00lyt00lytFC Vx02lyt04lytA0* Vx00lyt00lytFC Vx02lyt04lytA0* Vx00lyt00lytFC Vx02lyt04lytA0* Vx00lyt00lyt02 Vx02lyt04lytA05lyt00lyt00lyt02 Vx02lyt04lytA05lyt00lyt00lyt02 Vx02lyt04lytA05lyt00lyt02lyt18 Vx02lyt04lytA08lyt00lyt02lyt18	ec): 0 Custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1 NO Repeat, 1	Special Opt	Add Function Edit Function Delete Function Reorder Functions
Eunction I Show	Ist Main Button ID POWER ON POWER OFF POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE OFF MUTE (Toggle) INPUT INPUT INPUT	Function Display Name Power On Power Off POWER Vol+ Vol+ Mute On Mute Off Mute CD Aux	Description	Function Data Wait(ms) Vx02\x04\xA0^\x00\x00\x01\xFB xx02\x04\xA0^\x00\x00\x00\xFC vx02\x04\xA0^\x00\x00\x00 xx02\x04\xA0\x00\x00\x07 vx02\x04\xA05\x00\x00\x07 xx02\x04\xA05\x00\x00\x07 vx02\x04\xA05\x00\x00\x01 xx02\x04\xA05\x00\x00\x01 vx02\x04\xA05\x00\x00\x01 xx02\x04\xA05\x00\x00\x01 vx02\x04\xA05\x00\x00\x01 xx02\x04\xA05\x00\x00\x01	custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 NO Repeat, 1	Special Opt	Add Function Edit Function Delete Function Reorder Functions
Function I Show	Ist Main Button ID POWER ON POWER OFF POWER (roggle) VOLUME + VOLUME - MUTE ON MUTE OFF MUTE (roggle) INPUT INPUT INPUT	Function Display Name Power On Power Off POWER Vol+ Vol- Mute Off Mute Off Mute CD Aux Video	Description	Function Data Wait(ms V02/k04/kA0*/k00/k01/kFB kx02/k04/kA0*/k00/k01/k0FB kx02/k04/kA0*/k00/k00/kFC kx02/k03/kA0U/k00/k08 kx02/k03/kA0U/k00/k07 kx02/k03/kA0U/k00/k07 kx02/k04/kA05/k00/k01/k08 kx02/k04/kA05/k00/k01/k08 kx02/k04/kA05/k00/k01/k08 kx02/k04/kA05/k00/k01/k08 kx02/k04/kA05/k00/k00/k07 kx02/k04/kA05/k00/k00/k07 kx02/k04/kA05/k00/k00/k02 kx18 kx02/k04/kA08/k00/k0A/k10 kx02/k04/kA08/k00/k0A	c): 0 Custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 NO Repeat, 1	Special Opt	Add Function Edit Function Delete Function Reorder Functions Test Function
Function I Show	Ist Main Button ID POWER ON POWER OFF POWER (Toggle) VOLUME + VOLUME - MUTE ON MUTE OFF MUTE (Toggle) INPUT INPUT INPUT	Function Display Name Power On Power Off POWER Vol+ Vol+ Vol- Mute On Mute Off Mute CD Aux Video SAT/OBL	Description	Function Data Wait(ms) Vx02lx04lxA0*/x001x01lxFB Vx02lx04lxA0*/x001x001xFE Vx02lx04lxA0*/x001x001x08 Vx02lx04lxA0*/x001x01 Vx02lx04lxA0*/x001x010 Vx02lx04lxA0*/x001x01 Vx02lx04lxA0*/x001x01 Vx02lx04lxA0*/x001x01 Vx02lx04lxA0*/x001x01 Vx02lx04lxA0*/x001x01 Vx02lx04lxA05lx001x01 Vx02lx04lxA05lx001x01 Vx02lx04lxA08lx001x02lx18 Vx02lx04lxA08lx001x02lx18 Vx02lx04lxA08lx001x10 Vx02lx04lxA08lx001x16	ec): 0 Custom Option NO Repeat, 1 NO Repeat, 1 Default Repeat, 1 NO Repeat, 1	Special Opt	Add Function Edit Function Delete Function Reorder Functions Test Function



PROGRAMMING GUIDE

Accessing Custom Drivers:

All custom drivers are located in the "My" Database. The steps below describe how to access this database:

- 1. Select My.
- 2. Select Module Type: Choose the control type of the driver.
- 3. Select Category: Choose the category type.
- 4. Select Brand: Choose the brand.
- 5. Select Model: Choose the model of the driver.
- 6. Select Add Selected Modules.

Step 4 Add Non-URC Devices - Living Room		
Add Selected Modules		
1.Select Room : 5.Select Brand :	6.Select Model :	7.View Function List
Living Room SONY	STR-ZA3000ES	- Power
Descione		···· Power On
Previous		Power Off
2.Select Database :		Volume/Mute Functions
URC My		··· Vol+
3.Select Module Type :		Vol-
IR Database		Mute
4.Select Category :		
AUDIO 3		AUX TV
East tracting t		SA-CD/CD
Toot Through Boos Station		Band
		FM
MRX-10		BD/DVD
MAC: 00:00:00:00:00		SAT/CATV
IP : 0.0.0.0 Discover		Game
c Target		STB
		··· Video
ALL ALL		AM
Repeat : 3		Menu Functions
		II : ···· Home



PROGRAMMING GUIDE

Changing Custom Folder Location:

This is only necessary if the programmer has placed custom drivers outside of the **CustomDrv** default location:

- 1. Select the URC logo.
- 2. Select Flex Options.
- 3. Select Browse.
- 4. Choose a new folder **location**.
- 5. Select OK.







PROGRAMMING GUIDE

IR & RS232 Se	i)•(i) ensors 12V/Relay			
Zone	Device	Base Station	Port	Serial Port Settings
Living Room	Cable	MRX-30 Master(Living R 1	IR-ALL	None
Living Room	Blu-ray	MRX-30 Master(Living Room)	IR-ALL IR-A	
Living Room	Apple TV	MRX-30 Master(Living Room)	IR-ALL IR-1	3
Living Room	TV	MRX-30 Master(Living Room)	Select FIR-2	NONE, 1
			2 1R-3 1R-4 1R-5 1R-6 1R-7 1R-8 1R-9 1R-1	0
			IR-1 IR-1	1 2

Step 5 Base Station Setup: IR & RS232						
IR & RS232 Se	nsors 12V/Relay					
Zone	Device	Base Station	Port	Serial Port Settings		
Living Room	Cable	MRX-30 Master(Living Room)	IR-ALL	None		
Living Room	Blu-ray	MRX-30 Master(Living Room)	IR-ALL	None		
Living Room	Apple TV	MRX-30 Master(Living Room)	IR-ALL	None		
Living Room	TV	MRX-30 Master (Living Ro 3	Select Port	9600, 8, NONE, 1		
			RS23	32-1		



Step 5. MRX Setup

In this step IR and RS-232 ports are assigned. Sensors and 12V/Relays are also assigned in this step as well.

IR & RS232:

Use this sub-step to define the IR and/or RS-232 ports:

- 1. Select the **Port** column of an **IR device** (i.e. Cable).
- 2. Use the drop-down menu to select an IR port.
- 3. Select the Port column of an RS-232 device (i.e. TV, AVR, etc.).
- 4. Use the drop-down menu to select an RS-232 port.

When using auxiliary base stations in the project, assure that the appropriate one is selected. If not, select the **Base Station** column and use the drop-down menu to choose a different controller.



PROGRAMMING GUIDE

Sensors:

Select the Sensors sub-step. Define what devices are connected to any URC sensor. Available ports displayed in this sub-menu are dictated by the primary and auxiliary controllers in the Project Tree.

- 1. Double-click on an available Device Name column.
- 2. Enter the name for the device that is connected to the sensor (i.e. Cable).

Select Check Sensor to view the current state of the connected URC sensor.

Step 5 Base Station Setup:	SENSORS		
IR & RS232 Sensors	12V/Relay		
Base Station	Port	Device Name	Check Sensor
MRX-30 Master(Living Room)	1	Cable	
MRX-30 Master(Living Room)	2		
MRX-30 Master(Living Room)	3		
MRX-30 Master(Living Room)	4		
MRX-30 Master(Living Room)	5		
MRX-30 Master(Living Room)	6		

Step 5 Base Station Setur	: Relays And	12V Triggers
())•(()		
IR & RSZSZ SENSOIS	12V/Reldy	
Base Station	Port	Name
MRX-30 Master(Livin	Relay 1	TV Lift
MRX-30 Master(Livin	Relay 2	
MRX-30 Master(Livin	Relay 3	
MRX-30 Master(Livin	Relay 4	
MRX-30 Master(Livin	Relay 5	
MRX-30 Master(Livin	Relay 6	
MRX-30 Master(Livin	12V 1	
MRX-30 Master(Livin	12V 2	
MRX-30 Master(Livin	12V 3	
MRX-30 Master(Livin	12V 4	

12V/Relay:

Select the 12V/Relay sub-step. Define what devices are connected to any URC relay or 12V output. Available ports displayed in this sub-menu are dictated by the primary and auxiliary controllers in the Project Tree.

- 1. Double-click on an available field under the Name column.
- 2. Enter the name of the device that is connected to the **12V/Relay** (i.e. TV Lift).



Step 6: Network Setup

Total Control uses the project's network as its communication backbone. In this step, several parts of the network are defined.

LAN & Wi-Fi:

Selecting the **Apply PC Settings** button applies the programming computer's networking information into the appropriate fields. Although this feature is available, it is a best practice to double check the information by getting the **IP Config** from **Command Prompt**.

When using **Offsite Programming** and/or **Offsite Control**, use **Google's DNS** (8.8.8.8) for consistency and stability.

- Subnet Mask: Defines how many IP addresses are available to the Project's LAN. Most networks carry a subnet mask of 255.255.255.0.
- **Gateway:** Is the router that handles connections to other networks, this generally is linked to the WAN.
- DNS (Domain Name Server): A system which translates a domain name into an IP address. Use Google's DNS (Primary: 8.8.8.8 and/or Alternate: 8.8.4.4) as a best practice.

PROGRAMMING GUIDE

Step 6 Network Settings	LAN and WiFi	
- 1. LAN Network Info]
Subnet mask	255 . 255 . 255 . 0	
Gateway	192 . 168 . 7 . 1	
Preferred DNS	8.8.8.8	
Alternate DNS	8.8.4.4	Apply PC Settings
- 2. LAN Wireless Net	vorks	Send Wireless AP List via USB
Add New	Delete Properties	Up Down
Save]	

28



LAN Wireless Networks:

Wi-Fi information is assigned to the Project here:

- 1. Select Add New.
- 2. Accurately complete the following fields:
 - **Network Name (SSID):** The "name" of the Wi-Fi network. URC recommends using an SSID without spaces in the name. Spaces may cause intermittent connectivity issues with some Access Points.

Check the Hidden SSID box if the SSID is not being broadcast.

- Security Mode: Choose the Security Mode that matches the Access Point's configuration. Currently **WPA2-PSK** is the strongest form of encryption.
- **Data Encryption:** Generally this is set to AES, assure to match the encryption settings of the router.
- Network Key: Enter the networks password and confirm it in the Confirm Network Key section.
- **Key Index:** If using a Shared encryption with a key index, select a key using the drop-down menu. Do not use when using WPA or WPA2.
- 3. Select OK.

This network is added to the **LAN Wireless Networks** list. Select **Save** before moving into any other step or sub-step in Accelerator Flex 2.0.

PROGRAMMING GUIDE

Step 6 Network	CSettings: LAN and V	ViFi URC Device							
1. LAN Net	1. LAN Network Info								
Subnet	mask 255 .	255 . 255 . 0							
Gatewa	Wireless Network Key	у	x						
Preferre	Network Name (SSID) :	e1750							
Alterna	Security Mode :	Hidden SSID	C Settings						
2. LAN Wir	Data Encryption :	aes							
	Network Key :	•••••							
	Confirm Network Key :	••••••	nd s AP List						
	Key Index :	1 • Hex	USB						
	0	KCancel							
	Down								
Add	Add New Delete Properties								
Sav	e								

29



PROGRAMMING GUIDE

3 ц **URC Device:** URC Device Non URC Device LAN & Wifi This sub-step is used to identify (Discover) URC devices on the local network. URC devices can be assigned a static IP address from here as well. **Discovering Devices:** Refresh Mac Address IP Address Discovered:TKP-7600 IP Address Device Type Mac Address Description Room MRX-30 Master 00:00:00:00:00:00 DHCP TKP-7600(Unassigned) 00:1F:B8:30:01:4F 192.168.7.69 Jamie's TKP-7600 3 Living Room Assure that all URC Devices are connected to Assign Livina Room TKP-7600 00:00:00:00:00:00 DHCP the same network as the computer: 4 Living Room TDC-7100 00:00:00:00:00:00 DHCP 1. Select a URC device (i.e. TKP-7600) from the left side. 2. Select **Refresh**. Mac Address IP Address Device Room Type Living Room MRX-30 Master 00:00:00:00:00:00 DHCP The computer scans the network for an available URC device. Living Room TKP-7600 00:1F:B8:30:01:4F 192.168.7.69 DHCP Living Room TDC-7100 00:00:00:00:00:00 DHCP Select discovered device from the right. 3.

4. Select Assign.

The network information associated to the URC device is populated into the available fields at the left.



PROGRAMMING GUIDE

Room	Device	Mac Address	IP Address	Туре	
Living Room	MRX-30 Master	00:00:00:00:00:00		DHCP	
Living Room	TKP-7600	00:1F:B8:30:01:4F	192.168.7.69	DHCP	(1
Living Room	TDC-7100	00:00:00:00:00:00		DHCP	

	c	Connected		×
		Status]	Close
		Description	Jamie's TKP-7600	Settings
		MAC ID	00:1F:B8:30:01:4F	
		IP Address	192.168.7.69 (DHCP)	
Se	tti	ngs		x
D	esc Ne	tription Jamie's TKP twork Obtain an IP addres Use the following IP	2-7600 s automatically address	Save 5 Cancel
	4	IP address:	192 . 168 . 7 . 201	
		Subnet mask:	255 . 255 . 255 . 0]
		Default gateway:	192 . 168 . 7 . 1]
		Primary DNS:	8.8.8.8	
		Secondary DNS:	8.8.4.4	

Assigning a Static IP:

Always set URC devices to a static IP address:

- 1. Double-click on DHCP (located below the Type column).
- 2. Select Settings.
- 3. Select Use the following IP address.

4. Enter a static IP address.

Assure that the IP address assigned here is outside of the DHCP range in order to prevent IP conflicts.

5. Select Save.

Other network properties (Subnet Mask, Default Gateway, Primary DNS, Secondary DNS) cannot be adjusted here. The value of those parameters are set in the LAN & Wi-Fi sub-step (page 30).

6. Select Close.



PROGRAMMING GUIDE

Non URC Device:

Assign an IP address to all **Non URC** network controlled devices. This includes IP controlled and two-way controlled devices.

Each **Non URC** device must be assigned a static IP address whenever possible. Assign a static IP address to Non URC devices (AVRs, TVs, etc.) from within that device's network settings menu.

Certain Non URC devices may not allow a static IP assignment. For those types of devices (Roku), a DHCP reservation (also known as a MAC reservation) may be required. This is performed from within the router.

Follow these steps:

- 1. Select Non URC Device.
- 2. **Double-click** on the IP address column and enter the device's IP.
- 3. Select **Ping Select Device** to verify a network connection.

Certain device may not support this feature.

The **Non URC Device** sub-step is also used to assign IP addresses for two-way devices communicating over IP.

St	ep 6 Network S	ettings: Othe	r Devices			
	AN & Wifi	URC Device	Non URC Device	1		
	Zone Living Room	Device Audio	IP 4 2 192.	Address 168.7.202	Port 33	
						Ping Selected Device



PROGRAMMING GUIDE

Step 7: DMS Setup:

Perform this step ONLY when using URC's DMS Products (DMS-100, DMS-1200, etc.). This Total Control Flex 2.0 step is used to assign sources to streamable inputs connected to DMS devices.

Program this step only when DMS devices exist on the Project Tree. Use **Step 3: Add URC** Devices to add DMS devices on to the Project Tree.

ALWAYS add an **MFS-8** or **MFS-POE8** when using DMS products. These devices keep the music stream created by DMS devices separate from normal network traffic. Using DMS products without an MFS-8 or MFS-POE8 can cause major network issues.

There are four (4) sub-steps:

- **Inputs:** Assign available devices (Blu-ray, CD Player, etc) to an input on a DMS device. Devices assigned to inputs can be streamed to any room/area that is a DMS Zone.
- **Input Settings:** Allows the programmer to adjust input switch settings and specific input level settings.
- **Zone Assignments:** Assign a room/area to a DMS zone. All DMS Zones have access to the DMS stream.
- **Zone Settings:** Allows the programmer to adjust specific zone settings such as output, volume, and EQ settings.



Step 7 DMS Setup	: Assign AV Sources t	o Inputs			
23		¥ [
INPUTS Inpu	t Settings Zone As	signment Zone Set	ting	5	
Select Device v	vith Inputs		וה	Available Devices	
DMS-1200(Li	vina Room)	-		Living Room	Master Bedroom
				Cable	
Previous	Next	Configure		Blu-ray	
			í	Apple TV	
Available Inputs		Delete Selected		Audio-Main	
Input	Source	Streaming		Audio-Zone 2	
Input 1		Enable(Fixed)	111	Audio-Zone 3	
		E a b la (E a a d)		TV	
Input 2		Enable(Fixed)			
Input 3		Enable(Fixed)			
Input 4		Enable(Fixed)			



PROGRAMMING GUIDE

Inputs:

Follow these steps to assign inputs:

- 1. Use the drop-down menu to select a DMS device (i.e. DMS-1200).
- 2. Click and drag a device from the **Available Devices** section and drop it into an input on the DMS device.

The device is now assigned into the Input. Perform these steps for every device that needs to be added to the DMS stream.

DMS-1200's provide up to four (4) streamable inputs while the DMS-100 provides only a single streamable source.

St	tep 7 DMS Setup:	: Assign AV Sources t	o Inputs					
	INPUTS Input	t Settings Zone As	signment Zone S	etting	JS			
	-Select Device w	ith Inputs		h c	Avail	able Devices		
	DMS-1200(Liv	/ing Room)	-			Living Room	Master Bedroom	
1						Cable		
	Previous	Next	Configure			Blu-ray		
				21		Apple TV	2	
	Available Inputs		Delete Selecte	ed		Audio-Main		
	Input	Source	Streaming			Audio-Zone 2		
	Input 1	K	Enable(Fixed)			Audio-Zone 3		
	Travel D		taable (Fired)			TV		
	Input 2		thable(Fixed)	_ 1				T
	Input 3		Enable(Fixed)					
	Input 4		Enable(Fixed)					

2		
Input	Source	Streaming
Input 1	Blu-ray	Enable(Fixed)
Input 2		Enable(Fixed)
Input 3		Enable(Fixed)
Input 4		Enable(Fixed)

34



PROGRAMMING GUIDE

Input Settings:

Below are the steps used to adjust the available settings in this sub-step:

- 1. **Select DMS:** Use the drop-down menu or the Previous/Next buttons to select a DMS device.
- Global Input Setting When any DMS Switches Inputs: there are two (2) selectable options:
 - Instantly Switches Inputs: Audio switches from one input to the next immediately.
 - Fade Out, then Fade In: Audio fades out and the new audio input fades in. Use the drop-down menu to select the amount of time for this fade out/ fade in feature.
- 3. **Inputs:** Each assign input has the capability of having its level settings adjusted. Select the Input Level settings to display a drop-down menu that allows the programmer to select a different level type.

Step 7 DMS S	Setup: Input Sett	tings						
INPUTS	Input Settings	Zone Assignment Zone Settings						
Select DMS: DMS-1200(Living Room)								
Global Input Setting - When any DMS Switches Inputs:								
Input	Device	Input Level Setting						
Input 1 Input 2 Input 3 Input 4	Blu-ray	Level2 - 2.0Vp A/V Equipment Level1 - 2.2Vp (applies MINIMUM overall gain) Level2 - 2.0Vp A/V Equipment Level3 - 1.8Vp Level3 - 1.8Vp Level4 - 1.6Vp Level5 - 1.4Vp Level5 - 1.4Vp Level6 - 1.2Vp Mac Computers Level7 - 1.0Vp Portable Players/PC's Level8 - 0.8Vp Level9 - 0.6Vp Level10 - 0.4Vp (applies MAXIMUM overall gain)	3					


PROGRAMMING GUIDE

Zone Assignments:

Follow these steps to assign a room/area as a DMS Zone:

- 1. **Select Device with Outputs:** Use the drop-down menu or the Previous/Next buttons.
 - **Configure:** Only available on the DMS-1200, select configure to **combine** DMS zones together.
- 2. Click and drag a Zone from the **Un-Assigned Zones** section and drop it into an input on the DMS device.

The DMS-1200 supports up to eight (8) zones and the DMS-100 supports only a single zone.

3. **Boost Max Zone Output:** Only available on the DMS-1200, check this box to reallocate unused wattage.

-Select Device	with Outputs			Un-Assigned Zones :
DMS-1200(Li	iving Room)		*	Living Room
Previous	Next		Configure	Master Bedroom
Available Zone (Jutouts		Tieleta Salastar	Game Room
	7000	- Value	Max Output	Kitchen
Zanal	20ne	Enable		-
201101		Enable	100 W	-
2011E2		Enable	100 W	-
Zone4		Enable	100 W	-
Zone5		Enable	100 W	-
Zone5		Enable	100 W	-
2011E0		Enable	Dreamo	-
2011E7		Enable	Preamp	-
201160		LINADIE	Freahp	-
				_

Э



PROGRAMMING GUIDE

Zone Settings:

Specific DMS Zone settings can be manually adjusted by the system programmer:

- 1. **Select DMS:** Use this drop-down menu or the Previous/Next button to choose a DMS device from the Project Tree.
- 2. **Zone Select:** Choose a Zone from the list, settings changed from this point are specific to that zone unless performed globally.
- 3. **Zone Output:** Choose between Variable or Fixed, this choice only affects the selected Zone.
- 4. Volume: Below are the adjustable settings:
 - Max Volume: Use the drop-down menu to set a max volume level. Select the **Apply Global** button to assign this max volume level across all DMS Zones in the system.
 - **Turn On Volume:** Choose Last Used or a Preset volume. Use the drop-down menu to select a volume percentage. This setting must be adjusted for each Zone individually.
 - Turn On Vol. Ramp Rate: Determines how long the DMS device takes to reach the Turn On Volume. Select **Apply Global** to assign this setting across all DMS Zones in the system.
- 5. **Listener Distance to Speakers:** Use the drop-down menu to select the speaker location (Indoor or Outdoor). Select the approximate distance the end-user is from the speakers (3ft, 6ft, 12ft, or 25ft)

Step 7 DMS Setup:	Zone Audio Settings	
INPUTS Input	Settings Zone Assignment	Zone Settings
- Selected DMS: - DMS-1200(Liv Previous	ing Room) ×	Audio Settings: Zone 1, Living Room Connect To Zone
DMS Zone Zone1 Zone3 Zone4 Zone5 Zone6 Zone7 Zone8	Assigned Zone Living Room	Zone Output: <p< td=""></p<>



PROGRAMMING GUIDE

6. **Room EQ:** Custom EQ settings can be set for each DMS Zone individually. Basic customization option are available (**Bass Boost** and **Treble Boost**).

Select **Custom** for further options (see image below):

DMS Paramet	eric EQ (Zone:	l)					
Parametric EQ Settings							
	Band 1	Band 2	Band 3	Band 4	Band 5		
Frequency	80 Hz 🔹	125 Hz 🔹	250 Hz 🔹	1 kHz	4 kHz 🔹		
Gain	0 -	0 -	0 -	0	- 0 -		
Quality Factor (Q)	1.0 -	1.0 -	1.0 -	1.0	1.0 -		
				1	Reset to Defaults		
		ОК	Cancel				

Step 7 DMS Setup:	Zone Audio Settings	
INPUTS Input	Settings Zone Assignment	Zone Settings
Selected DMS: -	- Devel	Audio Settings: Zone 1, Living Room Connect To Zone
Previous	Next	
DMS Zone	Assigned Zone	Cone Output:
Zone1 Zone2	Living Room	Variable O Fixed
Zone3		
Zone4		Volume:
Zone5		Max Volume: 100 % Apply Global
Zone6		
Zone/		Turn On Volume: Cast Used Preset 26 %
201120		Turn On Vol. Ramp Rate: 0.6 sec Apply Global
		Listener distance to speakers
		Indoor 🔹 💿 3ft. 💿 6ft. 💿 12ft. 💿 25ft.
		Room EQ:
		Basic Basic Basic Basic Treble Boost
		Custom Advanced



Step 8: URC Subsystem:

In this step, specific subsystem parameter information is entered.

IP Cameras:

When using URC or 3rd Party Cameras, the username and password parameters must be defined in this sub-step.

- 1. **Select Remote/Keypad:** Camera can be hidden from almost any available interface in the system. Use this drop-down menu to select an interface.
- 2. **Cycle Time:** Can be adjusted for every interface in the system, determines how long a camera feed is on displayed before showing the next camera.
- 3. **Available Cameras:** All cameras added to the Project Tree are displayed on this list:
 - **Hidden:** Check this box to hide the selected camera from the interface chosen from the Select Remote/Keypad drop-down menu.
 - **Label:** Double-click on this field to edit the name of the camera. This changes the camera display name on URC interfaces.
 - **User:** Double-click on this field to enter a username. This information is REQUIRED for camera feeds to display.
 - **Password:** Double-click on this field to enter a password. This information is REQUIRED for camera feeds to display.
 - **Port (External):** Required for Offsite viewing of camera feeds. A port must be opened on the router and that port number is reflected here.

ep 8 Automa	ation: URC Camera					
Po						_
IP Cameras	TRF-ZW URC Interc	om				
Select Remo	ote/Keypad :					
TKP-7600 (Living Room)	*				
Cycle Time :	:					
6 sec		*				
Available Ca	ameras :					
Hidden	Zone	Device	Label	User	Password	Port(external)
	Kitchen	CAM-DC-O	CAM-DC-O	root	root	
	Kitchen	Kitchen Cam	Kitchen Cam	admin	pass	

PROGRAMMING GUIDE

&U:C°

TOTAL CONTROL 2.0 FLEX

TRF-ZW:

When programming Z-Wave, use this sub-step to import Z-Wave devices, rooms, and scenes into Total Control.

- 1. **Properties:** Displays the device properties of the TRF-ZW such as Name, MAC Address, and IP address.
- 2. **Connect to ZW:** Select this to display the TRF-ZW online login page. The Z-Wave programming portal, is accessible this way.
- 3. **Update Device Data:** Extracts programming properties from the Z-Wave gateway and imports them into the Total Control file.
- 4. **Match Room Data:** Assigns room data from UI7 to the matching rooms available in Total Control. Room name must be an exact match in spelling, spacing, and punctuation.
- 5. **Add Room to TRF-ZW:** Select to add a room to the Z-Wave gateway through Total Control Flex 2.0.
- 6. **Rename on TRF-ZW:** Select to rename a room from the Z-Wave gateway through Total Control Flex 2.0.

Pro	2		*			
	INPUTS Inpu	ut Settings Zone A	ssignment	Zone Settings		
	-Select Device	with Outputs			ı	Jn-Assigned Zo
	DMS-1200(L	iving Room)			-	Living Ro
p 8 Automation: TRF-ZW1	Previous	Next		Configure		Master Be
						Game Ro
	Available Zone (Dutputs		Delete Sele	cted	Kitche
	Output	Zone	Vol Po	Max Output		
Connection & Rooms Modu	Zone1		Enable	100 W		
TRF-ZW Device Informat	ti Zone2		Enable	100 W		
TRF	Zone3		Enable	100 W		
Properties	Zone4		Enable	100 W		
	Zone5		Enable	100 W		
	Zone6		Enable	100 W		
Rooms :	Zone7		Enable	Preamp		
Room (Total Control)	Zone8		Enable	Preamp		
Living Room						
Master Bedroom						
Game Room						
Kitchen						
	-					
5 Add Room to TRF-	2					
	Boost May 7	one Output				
	UOUST Max Z	one output				



PROGRAMMING GUIDE

- 6. **Modules:** Select this tab to provide add access to various Z-Wave modules. Access is provided by room.
 - a. **Select Module Type:** Choose from Locks, Lighting, Scenes, Thermostats, or Modes.
 - b. Select Add.
 - c. Choose to All to add the selected module to all rooms in the system or choose Selected Rooms and check the boxes to the rooms desired.
 - d. Select **OK**.





PROGRAMMING GUIDE

URC Intercom:

In this sub-step specific parameters are set for **Intercom-Enabled URC devices**. Each interface can have custom settings or settings can be copied from one interface and applied globally to all.

- 1. **Calling Station Setup:** These settings affect the behavior of interface that initiate a station call (Audio-Video, Audio-Only, etc.):
 - a. Selected Room: Use the drop-down menu to choose a specific room on the Project Tree. The All Rooms option displays all Intercom-Enabled interfaces in the system.
 - b. **Select Calling Station:** Select an interface from the list to customize it's settings. By default, all applicable options are selected (Answer Broadcast Calls, Auto Answer Incoming Calls, and Receive Door Station Calls).

Check the applicable box to enable a setting or uncheck to disable:

- Answer Broadcast Call: Allows the selected interface to answer broadcast calls.
- Auto Answer Incoming Calls: When enabled, this sets the URC interface to automatically answer calls from other compatible URC devices.
- **Receive Door Station Calls:** Allows the URC interface to receive calls from door stations such as DoorBird.
- c. **Apply Settings to Additional Stations:** Select to apply these settings to other interfaces in the system.





PROGRAMMING GUIDE

- 2. **Receiving Station Selection:** The properties located here affect what URC interfaces are available to receive a call from the Calling Station.
 - a. Default: Displays all intercom-enabled devices added to the system.
 - b. **Custom List:** Displays only the selected interfaces. The order of these interfaces can also be adjusted by using the First, Up, Down, or Last buttons. Only interfaces that have been checked appear.

View Stations: Displays all intercom-enabled URC devices.

View Groups: Displays all groups that were created by programmer.

Select All: Checks the boxes on all interfaces or groups.

Clear All: Deselects the boxes on all interfaces or groups.

- c. **Edit Groups:** Allows the programmer to create Groups and assign URC interfaces to those groups. Pre-existing Groups can be modified by selecting Edit Groups.
- 3. **Save:** Select to save and apply all changes.





PROGRAMMING GUIDE

Step 9: 3rd Party Two-Way Settings:

In this step, two-way device parameters are defined in the system. These parameters vary depending on the two-way module in use. Certain modules require a MAC address or other parameters that may be acquired through 3rd party software.

Always refer to the two-way module's integration guide for specific parameter information. Visit the <u>URC Dealer Portal</u> for additional information.

Although parameter information may be different, the following steps are almost always the same:

- 1. **Select Zone:** Choose the Room/Zone where the two-module is located.
- 2. Select Device: Choose a two-way device.
- 3. Select Module: Generally this auto-populates based on the selected module.
- 4. **Module Information:** The information required here is dependant on the two-way added to the system.
 - **Parameter:** Refer to the module's integration guide for specific details on required information.
 - **System Parameter Information:** Refer to the module's integration guide for specific details on required information.

wo Way Module Settings Volu	me Popup Settings	
	-Network Information	
1. Selected Zone :		
Game Room	MAC 00:00:00:00:00	
2. Select Device :	This device has been assigned a static IP	
Nest Thermostat	IP 0.0.0.	0
3. Select Module :	Port 0	
NEST Main Functions		
	- Module Information	
	Type :	
	NEST Main Functions	
	Parameter :	
		-
		-
	CSystem Parameter Information	
	System Parameter Information	



PROGRAMMING GUIDE

Step 10: UI & Macro Editing:

In this step, all user interfaces as well as associated macros are created. Total Control Flex 2.0 requires the system designer to program each user interface individually. That includes all orientation options (landscape and portrait) of applicable URC user interfaces.

Create Device Link: Menu Properties:

The following section defines all the select options available in this sub-step:

1. **Icon Category:** Use the drop-down menu to select a different graphic category folder.

Select a graphic and drag it onto the system designer at the right.

2. System Two-way Model: Almost all two-way modules added to the system are located here.

Select a graphic and drag it onto the system designer at the right.





PROGRAMMING GUIDE

TOTAL CONTROL 2.0 FLEX

- 3. **System Designer:** Drag images from the Icon Category and/or System Two-way Model windows onto this area. Image here can be rearranged and placed on Snap Points.
 - **Delete:** Removes the selected object from the System Designer.
 - Edit Snap Points: Select to display the Edit Snap Points menu. This menu contains various adjustable settings such as color, position, and more.
 - **Previous Page:** This button is "grayed" out when there is no previous page available.
 - Click on **Next Page** and the **Previous Page** button becomes available.
 - **Next Page:** Select to display the next available menu page.
 - Page Name: Enter a label for the current page.
 - **Device Name:** Enter a name for the device, this label serves as a button name.
 - Apply Changes: Saves all additions/modifications.





Create Device Link: Adding a Device/Activity

The following steps review the procedures required to add a device or activity on the system designer:

- 1. Select an interface from the Project Tree (i.e. TKP-7600).
- 2. Select an Icon Category.
- 3. Drag and drop a selected icon into the system designer. Changes made here only affect the selected interface.

PROGRAMMING GUIDE

- 4. Modify the device name (if needed).
- 5. Repeat steps for every device that needs to be included on this user interface. Remember that each interface must be programmed individually.

Certain UI properties such as text size, orientation, and more are configured in the **Macro & UI** sub-step.





PROGRAMMING GUIDE

Create Layout: Menu Properties

The following section defines all the select options available in this sub-step:

- 1. **Preview:** Provides a visual representation of the button layout selected.
- 2. **Select Device:** Displays all normal devices that have been added to the Model Tree.
- 3. **Select Button Layout:** Choose an available button layout, the layout selected is displayed in the Preview section.
- 4. Navigation Buttons: Below is a description of the available buttons:
 - **Prev Device:** Select to return to the previous device on the Select Device column.
 - **Next Device:** Select to return to the next device on the Select Device column.
 - Add Pages: Applies the highlighted button layout to the selected device.
 - **OverWrite Pages:** Replaces the device's current button layout with the one that is highlighted.
 - **Previous Page:** Available under the **Preview** section, select to view the previous page of the current Button Layout.
 - Next Page: Available under the Preview section, select to view the next page of the current button layout.





PROGRAMMING GUIDE

Create Layout: Adding a Button Layout

After creating a device link, that device almost always needs a button layout added so that the device menu page can be programmed.

- 1. Use the **Select Device** column to choose a device (i.e. Watch Cable).
- 2. Use the Select Button Layout column to choose a layout.
- 3. Select Add Pages.



When a button layout has been applied, notice the change on the **Model Tree**. The device displays the pages that were added based on the button layout selected.

Step 10 Main Menus/Layouts: Edit L	ayout			
	🔮 💿			
Create Device Link Create Layo	ut Macro & UI Special Macro	o Event Macro		
		Prev Device	Next Device	Add Pages
- Preview				OverWrite Pages
		Select Device :	Select Button Layo	out:
		Standard Device	Standard Device	
		Watch Cable	Standard Keypad	Page
CH+ 1 2 CH- 4 5 Prev 7 8 -/. 0	3 ► II 6 ● I 9 ← > Enter		Standard Other P Standard Transpo XL Device XL Keypad Page XL Nav Page XL Other Page XL Transport Page	age ort Page e
Into Keyp Previous P	ad K >>			



PROGRAMMING GUIDE

Macro & UI: Menu Properties

This section of the document is used to identify and describe the available menus and options found in this sub-step.







PROGRAMMING GUIDE

Macro & UI: TDC-7100/TKP-7600 Simulator

This window provides a visual representation of the user interface. Use this window to add custom button icons on to the interface.

The Total Control 2.0 Flex software contains core buttons that can be applied to almost any user interface.

- 1. From the **Model Tree**, right-click on the device.
- 2. Choose Select System Buttons.

The Select System Buttons window is displayed.

- 3. There are two (2) available sections here:
 - a. **Lower System Area:** Check the boxes on the buttons desired. This adds Volume, Mute Toggle, Shortcut, Main, and Power buttons.
 - b. Upper System Area: It is possible to enable the Device Name Display.
- 4. Select OK.



Select System Buttons	Select System Buttons					
Select the buttons that you want to be drawn on all pages of this device. The upper and lower areas may be hidden to allow customization if all items in the area are deselected. Lower system area will display status items(e.g.time) if enabled with the ch						
Volume Mute Toggle	Upper System Area					
I Short Cut I Main I Power						
4	OK Cancel					



PROGRAMMING GUIDE

The **TDC-7100-TKP-7600 Simulator** displays the system buttons that were added on the previous page.

Buttons can be added to all three (3) sections available:

- **Upper System Area:** Outside of the system buttons, any button can be added and programmed.
- Menu Area: Almost any button can be placed in this available space.
- Lower System Area: Outside of the system buttons, any button can be added and programmed.

In order to add buttons to the simulator, other tools available in this menu must be used like the **Image Gallery**.





Macro & UI: Property Window

Select an available button from the TDC-7100/TKP-7600 Simulator to populate data. There are several customization options available:

1. Variable: Select to create a new variable.

The drop-down menu allows the programmer to select from any previously created variables (**True/False only**).

2. **IR ID:** Use the drop-down menu to assign the button an IR ID. The IR ID is used when using the Save AII feature under the Connected Device menu.

When set, all appropriate commands are saved in the correct locations. For example, if an **IR ID** is set to **POWER ON** then when **Save All** is selected the **Power On** command from the **code set** is assigned to this button.

This applies for all control types (IR, IP, and RS-232).

3. **Button ID:** Represents the button label, when modified the button text matches what is entered in this section.





- 4. Text: There are two (2) states that can be configured:
 - Normal Text (Button Unpressed): Represents the normal state text, this is when the button has not been pressed.
 - a. **Display Text:** When enabled, the button text is displayed on the user interface. To hide the button text, uncheck the box.

Change the **Display Text** by selecting Normal, Date, Time, or Page. Only one (1) selection can be made.

- b. Text Font: Use the drop-down menu to select a different font style.
- c. **Text Alignment**: The text can also be justified on the button:

Left Justified: The first available option, select to align the button text to the left. Of the button

Center Justified: The second option, select to align the text to the center of the button.

Right Justified: The third available option, select to align the text to the right of the button.

Top Justified: Select to align the text to the top of the button.

Middle Justified: Select to align the text to the center of the button.

Bottom Justified: Select to align the text to the bottom of the button.





PROGRAMMING GUIDE

Advanced Alignment: Select to display the Font Options menu. This allows for advanced alignment using an X/Y axis.

Font Options	x
Offset X :	0
Offset Y :	d
Line Spacing :	0
ОК	Cancel

Font Size: Use the drop-down menu to adjust the size of the display text.

• **Pressed Text:** Provides all the same adjustable settings as Normal, but configuration only affects the button behavior when it is pressed or displaying the pressed state by other means such as a variable.

Property	
[Button] Norm	al
Variable —	
NEW	[None]
IR ID	Not Set
Button ID	Watch Cable
Text	
Normal Text	Pressed Text
Normal	W Display Fext
Bobo	to Light
Watch Lab	
Image	
A.9	
Watch TV 1_	N_500. Pressed_P_600.png
Gif Animation :	Animate Always
← Position And !	Size
_X*Y	Width * Height
49 ×	46 210 * 140
`	
Property Cor	nnected Device / Image Gallery



- 5. **Image:** Has two (2) configurable states:
 - **Normal:** Represents what graphic is displayed when the button is not pressed. The graphic can be changed or modified using these settings:

Upload Image: Select the " ² " button to choose a graphic located on the computer. Graphics must fit the available space and if the alternate image stat is present, it must also match that image size. Supported formats: .PNG, .JPEG, .GIF, and .BMP.

Save As: Select the 📤 button to save the selected graphic to the PC.

Delete: Select the 🍀 button to remove the current assign graphic.

Button Pressed Color: Selects the color for the button if it is not an image file. Select the **I** button to choose a different color.

• **Pressed:** Represents what graphic is displayed when the button is pressed or displaying the pressed state. The same settings for Normal are available under the Pressed options.

The color of the **Upload Image** and **Save As** icons have been changed to help differentiate between Normal and Pressed.

For a description of each button, read the Normal state button description on this page.

6. **Gif Animation:** Choose how the software behaves when .gif files are present. Set the animation settings to Always or Once.

PROGRAMMING GUIDE

Property		
[Button] Norma	al	
NEW	[None]	
IR ID	Not Set	
Button ID	Watch Cable	
Normal Text	Pressed Text Display Text Date Time Page to Light = + = + 35 +	
Image Normal A A X [Watch TV 1_	Pressed	
Gif Animation : Position And S X*Y 49 *	Animate Always	6
Property /Con	inected Device /Image Gallery	
	Property [Button] Normal Variable NEW IR ID Button ID Text Normal Text Normal Text Normal Robor E Robor E Text Normal C Normal C Normal C Normal C Normal Norm	Property Variable NEW IR ID Not Set Button ID Watch Cable Text Normal Date Time Page Image Normal Date Time Page Image Normal Pressed Normal Pressed Image Normal Pressed Position And Size X * Y Y Y Y Y Y Y Y Normal Normal Position And Size X * Y Y Y



PROGRAMMING GUIDE

- 7. **Position and Size:** Used to indicate the precise coordinates of the button position and allow repositioning without clicking-and-dragging by editing the X/Y axis.
 - Almost any button can be moved/repositioned on the **Simulator** by dragging and dropping.

This section is used for more accurate placement on the available field of the simulator. Moving an object around on the simulator changes the value of the X/Y axis.

Property			
[Button] Norm	al		
NEW	[None]		_]
IR ID	Not Set		-
Button ID	Watch Ca	able	
Text —)		
Normal Lext	Pressed	Text	
💿 Normal	Ols () Date	© Time (🔿 Page
Robo	to Light		-
	╤ ÷	📑 💠 3	5 -
Watch Cab	le		
Image Normal Pressed Image Image			
Gif Animation :	Animate	Always	
⊂ Position And !	Size ——		
-X*Y		Width * Heig	pht
49 ×	46	210	° 140
Property Cor	nnected De	vice Image	Gallery



Macro & UI: Image Gallery:

The **Image Gallery** provides the programmer access to all the images available in the URC software.

1. Select the "..." button.

The Select Folder window displays.

- 2. Double-click on the folder labeled Image Gallery.
- 3. Select from any of the category folders displayed to load those graphics into the **Image Gallery** window.
- 4. Drag and drop an available image to add a new button to the **TDC-7100/TKP-7600 Simulator**.





Gallery Background: Changes the background color of the available images. May help programmers view the graphics more clearly.

PROGRAMMING GUIDE





PROGRAMMING GUIDE

Macro & UI: Connected Device & Macro Window

The following section goes over the process of creating macros for the buttons placed on the TDC-7100/TKP-7600 Simulator. Remember, all buttons added have no macro data assigned.

Connected Device Window Properties:

Use the Connected Device window to add the following to almost any macro:

- **Connected Device:** Add a single command (IR, IP, or RS-232) to any macro.
- **ZW Device:** Add a one-way Z-Wave command from almost any Z-Wave device. Z-Wave devices must be configured in UI 7 and imported into the Flex 2.0 software (<u>page 41</u>).
- **Device Power Macros:** Act as a convenient place for programmers to manage power delays and for tracking device power.

If used exclusively, these macros allow the Total Control Flex 2.0 software to properly track the power state of non-URC devices.

 Stream Select: Allows the programmer to add a specific DMS stream into a macro.



PROGRAMMING GUIDE

- **Room Power Macros:** Are available for custom programming and can be used as a convenient place to program the power on and power off macros of a zone/area.
- **System Commands:** Contains a DMS ALL ZONE OFF command that can be added to almost any macro.
- Universal Macros: Are a type of Special Macros that have multiple purpose in the software. Create a macro as a Universal Macro and have access to it in almost any location within Step 10: UI & Macro Editing.

Connected Device	Macro
Connected Device	Button
Connected Device	┶> 🎱 🔳 🗱 😂 🚯 T 🖂 🏦 🏵 🖧 🗣 🖧 🖯 🦿
ZW-1 Device	
Device Power Macros	
Stream Select	
2 Way Light Commands	
2-way Light Commanus	
Room Power Macros	
System Commands	
Universal Macros	
PAUSE	
REW	
FF	
RECORD	
GUIDE	
MENU	
INFO	
EXIT	
LEFT	
RIGHT	
UP	
DOWN	
OK III	
0	
1	
2	
3	
4 F	
5	
2	
/	
5	
ENTER	
A D	
CO INTERACTIVE	
BACK	
SKTP	
REPLAY	
VOL+	
VOI -	
MUTE	
POWED	
Property /Image Ca. Connecto	



Macro Window Properties:

The following are the attributes of the Macro Window (from left to right):

- Play: Select to test the macro.
- **Record:** Select to begin recording commands to the macro window. Commands are selected from Connected Device drop-down menu.
- Stop: Select to stop recording commands into the macro window.
- Delete: Removes the selected command from the macro window.
- **IF/Else:** Select to add an IF/Else, IF/Else +AND, or IF/Else +OR conditional logic statement to the macro.
- Toggle: Select to add a toggle statement to a macro. Set commands within the toggle statement. When the button the macro is associated to is pressed, the commands cycle based on the order and button press.
- Delay: Select to manually add a delay to the macro.
- **Text:** Select to add text to a button after it is pressed. This text is temporary and disappears after the macro completes.
- **Variable:** Select to create or modify variables. Variable states can be added to the macro by selecting this icon.
- 2-Way Module Command: Select to add a command from a two-way module that was added to the system.





PROGRAMMING GUIDE

- **Relay:** Select to add a relay command.
- **12V:** Select to add a 12V command, this can be used for devices like TV Lifts and other devices that require 12V.
- LCD Setting: Used to set in-wall keypads into an Off, Default, Always On, or Night Mode state.
- Jump: Select to add a Special Jump (Please Wait) or a device jump.
- Notifications: Select to configure and add a Push Notification to the macro window. For full details, refer to the Push Notifications Guide.
- URC Client Command: Allows the programmer to add a command that can set all or a specified URC Client (user interface) into or out of **Do Not Disturb Mode**.

This feature supports Do Not Disturb On or Do Not Disturb Off.





PROGRAMMING GUIDE

Default Jump 💿 Special Jump

Jump Setting

Select Target

⊟ TKP-7600 . Main Pages

(**A**

Programming a Macro:

The following example programs a macro for the Watch Cable button that was created earlier in the document. Macro

Button

05

- 1. Select the **Jump** icon from the macro window:
 - a. Choose Select Target.
 - b. Locate the device (i.e. Watch Cable).
 - c. Select which **page to jump** to (i.e. keypad, navigation, other, etc.).
 - d. Select **OK**.
- 2. .Select the **Jump** icon from the macro window:
 - a. Select Special Jump.
 - b. Select Please Wait.
 - c. Select **OK**.

A **Please Wait** screen is added to the macro so that the end-user is presented with a different display when the button is pressed.

The **Please Wait** display is removed when the macro completes.





PROGRAMMING GUIDE





PROGRAMMING GUIDE





PROGRAMMING GUIDE

Macro & UI: Assigning Commands to Device Pages

When adding a button layout in the Create Layout sub-step, template pages are added to the device without any device data.

The following example adds IR data to the device pages of the Cable Box (Watch Cable):

1. Select the device page from the Model Tree (for example: Keypad).

The TDC-7100/TKP-7600 Simulator displays the page selected.



		т	DC-7100 / TKP-7600 SIMULATO	R		
CH+		1	2	3		н
CH-		4	5	6	•	
Drey		7	8	9	44	
TTCV		-/.	0	Enter		
Info			Keypad		••	>>
\bigcirc	Mute	(+)		Ē	Main	(



2. Locate the **Connected Device** menu:

- a. Choose Connected Device.
- b. Select the **room** where the device is located.
- c. Select the device.

3. Select Save All.

The software assigns the functions to appropriate Button ID. A notification window appears informing the programmer how many commands were assigned to a button.

Function are assigned to all pages of the button layout. Notice the "**P**" on the bottom left corner of the button in the **TDC-7100/TKP-7600 Simulator**. This represents that there is Pre-Programmed data assigned to the button.

Certain buttons may be **Hidden**, right-click and uncheck the Hide option to reveal the button. These may be black buttons added by the code set.

Buttons displayed in the simulator can be rearranged to the programmer's preference. Other buttons can be added by using the **Image Gallery**.



PROGRAMMING GUIDE





PROGRAMMING GUIDE

UI & Macro Editing: Special Macro

Total Control Flex 2.0 uses various types of system macros and these macro can be modified and/or created from the Special Macro sub-step.

The following is a description of each type of Special Macro available:

• Device Power Macros: Are created automatically by the software. These macros cannot be created; however, they can be modified. A Power On/Start and Power Off/Stop are created for each device in the system.

The delay located in this macros is derived from the Power On Delay and Power Off Delay assigned from the device driver.

- **Room Power Macros:** Support a Power On/Start and Power Off/Stop state. Each state must be programmed manually.
- **System Macros:** Contains a placeholder for the House Off macro. This is designed to turn off the entire system. However, due to the nature of Flex, it must be programmed manually.

Additional system macros cannot be created.

• Universal Macros: Can be used almost anywhere in the system.

It is best to use these macros for an event/activity that is required for "one-time" use for example lighting events (lamp on/off).

Step 10 Main Menus/Layouts: Edit Spe	ecial Macros		
Create Device Link Create Layout	t Macro & UI Special Macro Event Macro		_
Select Type of Special Macro :	Connected Device		
Device Power Macros	- [▶ ● ■ 終 際 ⇔ ① T 回 勉 恐 삶 🕆 超 🏅	Connected Device	-
Device Power Macros Room Power Macros	Power On/Start Power Off/Stop	Living Room	*
System Off Macros Universal Macros	ODELAY (0.5 Second)	Cable	-
Power Menu Macros Sensor Macros Event Timer Macros Alarm Clock Macros Sleep Timer Macros	*	LAST CHIPG+ CHIPG- PLAY STOP	
Blu-ray Apple TV Main(Audio) Zone 2(Audio) Zone 3(Audio)		PAUSE REW FF RECORD GUIDE MENU	
Zone1(DMS-1200) Zone2(DMS-1200) Zone3(DMS-1200) Zone4(DMS-1200)		INFO EXIT LEFT RIGHT	
Zone5(DMS-1200) Zone6(DMS-1200) Zone7(DMS-1200) Zone8(DMS-1200)		DOWN OK 0	



PROGRAMMING GUIDE

• **Power Menu Macros:** A system feature of Total Control is the ability to press and hold the power button for greater than three (3) seconds to display the Power Menu.

S Þ Create Device Link Create Layout Macro & UI Special Macro Event Macro Device Power : Cable Select Type of Special Macro : 🔁 🛸 🗷 🐼 🖄 🖓 🖓 🖓 🕹 😓 😓 . Device Power Macros Connected Device Power On/Start Power Off/Stop Device Power Macros Living Room Room Power Macros Connected Data (Cable, POWER) System Off Macros Cable () DELAY (0.5 Second) Universal Macros Power Menu Macros LAST Sensor Macros CH|PG+ Event Timer Macros CH PG-Alarm Clock Macros PLAY Sleep Timer Macros STOP PAUSE Blu-ray REW Apple TV Main(Audio) FF RECORD Zone 2(Audio) GUIDE Zone 3(Audio) MENU тν INFO Zone1(DMS-1200) Zone2(DMS-1200) EXIT LEFT Zone3(DMS-1200) RIGHT Zone4(DMS-1200) UP Zone5(DMS-1200) DOWN Zone6(DMS-1200) OK Zone7(DMS-1200) Zone8(DMS-1200) 0

The Macros on this Power Menu are derived from this section of the programming. Macros can be added Globally (across all room) or per room.

- **Sensor Macros:** Use this section to program any URC Sensors that are connected to the base station.
- Event Timer Macros: Macros created here are placed into the Event Timer Menu which is accessed from a user interface.

These types of macros trigger an event (i.e. turning on the patio lights) and allows the end-user to schedule the start and stop of the event.

• Alarm Clock Macros: Macros created here are placed into the Alarm Clock Menu which is access from the user interface.

These types of macros trigger an event (i.e. turning on the patio lights) and allows the end-user to program the alarm start time.

• Sleep Timer Macros: These macros are room based and are accessible from the Sleep Timer Menu.

These macros allow the end-user to set an allotted time to trigger an event (i.e. in 15 minutes...turn off the living room).



Viewing/Editing Device Power Macros:

Below are the way to access Device Power Macros:

- 1. Select Device Power Macros from the drop-down menu.
- 2. Select the room/area in the system to begin editing Device Power Macros.
- 3. Select a device (i.e. Cable, Blu-ray, etc.).
- 4. By default, **Power On/Start** is displayed. This macro window contains the Power On command derived from the device's driver.
- This Connected Data command can be replaced with any other type of Connected Device command or ZW commands available in the Connected Device drop-down menu.
- 6. In some cases, the **Delay** time here needs to be adjusted. **Double-click** on the **DELAY** in the macro window and increase the delay time to the desired length. Certain devices require a pause when turning on before they're able to receive other commands.

Typically, this delay period is assigned from within the driver, but it can be adjusted from here.

7. Select the **Power Off/Stop** tab if adjustments need to be made to the **Device Power Macros** Off side..

	Step 10 Main Menus/Layouts: Edit Special Macros				
	Create Device Link Create Layout	Macro & UI Special Macro E	vent Macro		
	Select Type of Special Macro :	Select Type of Special Macro : Device Power : Cable			
	Device Power Macros		OT va ta V 💰 🕆 🗗 🏅	Connected Device	r
	Select Room :	Power On/Start 4 Of	ff/Stop	Living Room	r
/	Living Room 🔹	ODELAY (0.5 Second)	bic, Forrerg	Cable	r
	Add/Delete Nested Macros : Delete Add Macro	*		LAST A CHIPG+ CHIPG- PLAY	
	Cable Blu-ray Apple TV			STOP PAUSE REW	
	Main(Audio) Zone 2(Audio) Zone 3(Audio)			FF RECORD GUIDE MENU	

PROGRAMMING GUIDE





7C



PROGRAMMING GUIDE

Room Power Macros:

The second options under the Select Type of Special Macro drop-down menu. Like Device Power Macros, these contain a **Power On/Start** and a **Power Off/Stop**.

The **Power Off/Stop** section reveals important information in terms of what Device Power Macros are issued when the Power Off button is selected.

Due to the nature of the Total Control Flex 2.0 software, these must be configured manually by the programmer:

- 1. Select Room Power Macros.
- 2. Select a Room/Area.
- 3. Select Power Off/Stop.
- 4. Select **Device Power Macros** from the **Connected Device** drop-down menu.
- 5. Add the **device Off commands** for every device in the room/area that needs to be turned off when the **Room Off** command is issued.

Perform these steps for every room/area in the system.



Step 10 Main Menus/Layouts: Edit Special Macros				
Create Device Link Create Layout	Macro & UI Special Macro Event Macro			
Select Type of Special Macro :	Room Power : Living Room	Connected Device		
Room Power Macros	► I ● ■ I \$\$ I \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	Device Power Macros		
Select Room : Add/Delete Nested Macros : Delete Add Macro 5 Living Room Master Bedroom Game Room Kitchen	Power On/Start Power Off/Stop Device Power OFF (Cable) Device Power OFF (Blu-ray) Device Power OFF (Apple TV) Device Power OFF (Main Audio) Device Power OFF (TV)	Living Room Cable Off Cable Off Cable On Blu-ray Off Blu-ray Off Apple TV Off Apple TV On Audio::Main Off Audio::Main Off		
		Audio::Zone 2 Off Audio::Zone 2 On Audio::Zone 3 Off Audio::Zone 3 On TV Off TV On		


PROGRAMMING GUIDE

System Macro:

The next item on the Select Type of Special Macro drop-down menu is called **System Off Macros**. Only one macro is placed here, **House Off**, and it serves as place holder.

System Macros cannot be created; however, the House Off placeholder can be configured. The House Off macro only appears in the **Power Menu** and is designed to turn off an entire system.

Follow these steps for basic programming of the House Off macro:

- 1. Select System Off Macros.
- 2. Select House Off.
- 3. Select System Commands from the Connected Device drop-down menu.

It is a best practice to include the **DMS All ZONE OFF** command into the House Off macro when using DMS in a system.

- 4. Add the **DMS All ZONE Off** command.
- 5. Select **Room Power Macros** from the Connected Device drop-down menu.

It is a best practice to include the **Room Power Off** commands for every room/area in the system.

6. Add the Room Power Off commands for each room/area in the system.







PROGRAMMING GUIDE

Universal Macros:

These are one of the most versatile forms of special macros available in any Total Control system.

Universal Macros can utilize almost any command type located in the Connected Device drop-down menu.

Groups can be created. This serves as a great way to keep Universal Macros organized and concise.

Step 10 Main Menus/Layouts: Edit Special Macros		
Create Device Link Create Layout	Macro & UI Special Macro Event Macro	
Select Type of Special Macro :	Macro :	Connected Device
Universal Macros 🔹		Connected Device
Select Group :	Power On/Start Power Off/Stop	Living Room 🔹
General		Cable
Add/Delete Nested Macros : Delete Add Macro		LAST CHIPG+ CHIPG- PLAY STOP PAUSE REW FF RECORD



PROGRAMMING GUIDE

Event Timer Macros:

Event Timers can be set by the end-user. The end-user selects an Event Timer Macro and manually sets what time the macro is to issue.

The other type of **Event Timer Macro** involves the use of **Start/Stop Macro**. When an end-user selects one of these macros, the interfaces requests a set **Start** and **End time**.

Time is set by the end-user from any interface with access to the Event Timer Menu.

The following steps can be used to create an Event Timer for single time use:

- 1. Select Event Timer Macros.
- 2. Select Add Macro.
- 3. Enter a **name**, this label is viewed by the end-user on the **Event Timer** menu.
- 4. Select OK.
- 5. Program the macro using the options available through the **Connected Device** drop-down menu.



Step 10 Main Menus/Layouts: Edit Speci	al Macros	
Create Device Link Create Layout	Macro & UI Special Macro Event Macro	
Select Type of Special Macro :	Event Timer : Front Door Lock	Connected Device
Event Timer Macros	▶ ● ■ ≫ 噤 ⇔ � T ⊠ 捡 छ ‰ ♥ ♬ 📲	Connected Device
Select Room :	Power On/Start Power Off/Stop	Living Room 🔻
5		Cable
Add/Delete Nested Macros : Delete Add Macro Front Door Lock		LAST CHIPG+ CHIPG- PLAY STOP PAUSE REW EE



PROGRAMMING GUIDE

Follow these steps to create an **Event Timer Macro** that uses the **Start/Stop**, this means that there is an action for when the macro begins and a separate action for when it ends:

- 1. Select Event Timer Macros.
- 2. Select Add Macro.
- 3. Enter a **name**, this label is viewed by the end-user on the **Event Timer** menu.
- 4. Check the box **Use Start/Stop Macro**.
- 5. Select **OK**.
- 6. Program the **Power On/Start** macro using the options available through the **Connected Device** drop-down menu.

This macro only triggers during the start time of the event. The start time is configured by the end-user on a URC interface.



Step 10 Main Menus/Layouts: Edit Special Macros		
Create Device Link Create Layout	Macro & UI Special Macro Event Macro	
Select Type of Special Macro :	Event Timer : Patio Lights On/Off	Connected Device
Event Timer Macros		Connected Device 🔹
Select Room :	Power On/Start Power Off/Stop	Living Room 👻
6		Cable 🔹
Add/Delete Nested Macros : Delete Add Macro Front Door Lock Patio Lights On/Off		LAST CHIPG+ CHIPG- PLAY STOP PAUSE REW



PROGRAMMING GUIDE

- 7. Select Power Off/Stop.
- 8. Program the **Power Off/Stop** macro using the options available through the **Connected Device** drop-down menu.

This macro only triggers during the end time of the event. The end time is configured by the end-user on a URC interface.

Step 10 Main Menus/Layouts: Edit Speci	tep 10 Main Menus/Layouts: Edit Special Macros			
Create Device Link Create Layout	Macro & UI Special Macro Event Macro			
Select Type of Special Macro :	Event Timer : Patio Lights On/Off	Connected Device		
Event Timer Macros	▶●■¥≌⇔ふてॼ⋬₿≴₽₽	Connected Device 🔹		
Select Room :	Power On/Start Power Off/Stop	Living Room 🔻		
		Cable		
Add/Delete Nested Macros : Delete Add Macro Front Door Lock Patio Lights On/Off		LAST CHIPG+ CHIPG- PLAY STOP PAUSE REW		



PROGRAMMING GUIDE

Alarm Clock Macros:

Creating macro here adds them to the **Alarm Clock Menu** where the end-user can select them. Upon selection, the interface prompts the end-user to set a time for the macro to trigger.

Follow these steps to create an Alarm Clock Macro:

- 1. Select Alarm Clock Macros.
- 2. Select a room/area from the drop-down menu. These types of special macros are room/area-specific.
- 3. Select Add Macro.
- 4. Enter a **name**, this label is viewed by the end-user on the **Alarm Clock** menu.
- 5. Program the **Power On/Start** macro using the options available through the **Connected Device** drop-down menu.

This macro only triggers when the time set by the end-user has been met (i.e. 8 am alarm).



Step 10 Main Menus/Layouts: Edit Special Macros		
Create Device Link Create Layout	Macro & UI Special Macro	
Select Type of Special Macro :	Alarm Clock : Good Morning	Connected Device
Alarm Clock Macros	▶ ● ■ 終 壁 ⇔ ④ T 🖬 勉 級 鈴 伊 🍹	Connected Device
Select Room :	Power On/Start Power Off/Stop	Living Room 🔹
Living Room	^ 	Cable 🔹
Add/Delete Nested Macros : Delete Add Macro Good Morning		LAST CH PG+ CH PG- PLAY STOP PAUSE REW



PROGRAMMING GUIDE

6. URC Alarm Clock Macros support a separate action for when the end-user selects the **Snooze** button.

Select Power Off/Stop.

7. Program the **Power Off/Stop** macro using the options available through the **Connected Device** drop-down menu.

This macro only triggers when the time set by the end-user selects the snooze button after the alarm has been triggered or when the alarm is turned off.

Step 10 Main Menus/Layouts: Edit Special Macros			
Create Device Link Create Layout	Macro & UI Special Macro Event Macro		
Select Type of Special Macro :	Alarm Clock : Good Morning	Connected Device	
Alarm Clock Macros		Connected Device 🔹	
Select Room :	Power On/Start Power Off/Stop	Living Room 🔹	
Living Room		Cable 🔹	
Add/Delete Nested Macros : Delete Add Macro Good Morning		LAST CH PG+ CH PG- PLAY STOP PAUSE REW	



PROGRAMMING GUIDE

Sleep Timer Macros:

Creating macro here adds them to the **Sleep Timer Menu** where the end-user can select them. Upon selection, the interface prompts the end-user to set a time for the macro to trigger.

Follow these steps to create a Sleep Timer Macro:

- 1. Select Sleep Timer Macros.
- 2. Select the room/area.

Sleep Timer Macros are specific to the room/area they are programmed in.

- 3. Select Add Macro.
- 4. Enter a **name**, this label is viewed by the end-user on the **Sleep Timer** menu.
- 5. Select OK.
- 6. Program the macro using the options available through the **Connected Device** drop-down menu.

If Room Power Macros have been configured (page X), use them to turn off specific rooms in the system.

Repeat these steps for every room that needs a **Sleep Timer Macro**.



Step 10 Main Menus/Layouts: Edit Special Macros		
Create Device Link Create Layout	Macro & UI Special Macro	
Select Type of Special Macro :	Sleep Timer : Turn Off This Room	Connected Device
Sleep Timer Macros		Room Power Macros
Select Room :	Power On/Start Power Off/Stop	· · · · · · · · · · · · · · · · · · ·
Living Room 🔻	*	
Add/Delete Nested Macros : Delete Add Macro Turn Off This Room		Living Room Off Living Room On Master Bedroom Off Master Bedroom On Game Room Off Game Room On Kitchen Off



Variables and Advanced Logic:

IF Setting -Type True Relay O URC Clie

> Room Device

Just like Accelerator 2.0, Total Control Flex 2.0 supports more advanced conditional logic statement. Below are the new Advanced Logic that can be found in the software:

- Device Power: Tracks a device's power state to trigger a macro.
- Time & Date: Have macros query a specific Time, Week Day, Month Day, Month, and/or Date to trigger a macro.

Advanced Conditional Logic: New logic sta IF/Else, IF/Else +AND, and IF/Else +OR.	tements in the form of	OK
URC Client: Allows the programmer to poll a s macro based on its Do Not Disturb mode.	specific device and trigger a	Currer
© Press Time ○ Variable ○ Sensor ○ Device Condition ○ 12V ○ Thermostat ④ Device Power ○ Time / Date	IF Setting X Type True Press Time Variable Sensor Device Condition Relay 12V Thermostat Device Power Time / Date URC Client	IF Setting Type Type True Press Time Variable Sensor Device Condit Relay 12V Thermostat Device Power Time / Date
Living Room Cable	Time Week Day Month Day Month Date	Room Living Room Available Device
NO ©	AND () 4:54:00 PM +	TKP-7600 Compare Condition Available Variable Do Not Disturb TRUE FALSE TRUE
OK Close		OK Close

PROGRAMMING GUIDE

IF State	ment Type	х
Select th The type	e type of IF/Else you want to add to th can't be changed after creation.	ne macro.
	Else +AND/Else +OR/Else	
	OK Cancel	



PROGRAMMING GUIDE

Creating Variable:

The following section covers the basic information for creating variable in Total Control Flex 2.0

- 1. Select the **variable** button from the macro toolbar.
- 2. Select Add New.
- 3. Enter a **name** for the variable, this label is never viewed by the end-user.
- 4. Set the default value to False.
- 5. Select OK.
- 6. Select a variable state (True or False)
- 7. Select Set.

This adds the variable state to a macro.







Using IF/Else:

Variables and advanced conditional logic can be used in almost any macro of Total Control Flex 2.0.

The following example creates an IF/Else statement in conjunction with the variable created in the previous section.

- 1. Select the IF/Else button from the macro toolbar.
- 2. Highlight **Else** and select **OK**.
- 3. Select Variable.



🕽 🛽 🖏 🍪 🖄 🔟 🏹 🖓 🕄 🏟 🕄 🖓	
IF Statement Type X	
Select the type of IF/Else you want to add to the macro. The type can't be changed after creation.	
Else +AND/Else +OR/Else	
2 OK Cancel	

PROGRAMMING GUIDE

- 4. Choose a True/False.
- 5. Select OK.

82

This creates an IF/Else statement with a variable condition.



PROGRAMMING GUIDE

Using IF/Else +AND:

+AND logic statements add depth to IF/Else statements that need to check for more than one (1) condition.

"If [variable 1] AND [variable 2] are met, then perform this action. Else perform another action."

- 1. Select the **IF/Else** button from the macro toolbar.
- 2. Highlight +AND/Else and select OK.



🕽 🔳 😫 😫 🗇 😱 🔟 📾 🏙 😵 🍰 🖗 🗶 🥩	}
IF Statement Type ×	
Select the type of IF/Else you want to add to the macro. The type can't be changed after creation.	
Else	
+AND/Else	
+OR/Else	
2 ОК Cancel	

- 3. Select an **IF Setting** option. This becomes the first item the IF/Else logic statement polls.
- 4. Select OK.



PROGRAMMING GUIDE

- 5. **Double-click** on the IF statement.
- 6. Select Add Condition.
- 7. Select an **IF Setting** option. This becomes the second item the IF/Else logic statement polls.

The macro only triggers if BOTH conditions are met.

8. Select OK.



	Universal : Example		
	🕨 🔍 🖧 💱 🖾 🕀 🕄 🖓 🖓 🖓 🖉		
_	Power On/Start Power Off/Stop		
5)	🖳 IF (Device Power Cable:Living Room, ON)		
	ELSE		
	*		



Universal : Example	
🕞 🕒 🎕 🕸 🕼 🐨 🏹 🖓 🕼 🗇 🕼	9
Power On/Start Power Off/Stop	
🖳 IF (Device Power Cable:Living Room, ON)	
AND (Device Power Blu-ray:Living Room, ON)	
ELSE	
*	



PROGRAMMING GUIDE

Using IF/Else +OR:

+OR logic statements add depth to IF/Else statements that need to check for more than one (1) condition.

"If [variable 1] OR [variable 2] are met, then perform this action. Else perform another action."

- 1. Select the **IF/Else** button from the macro toolbar.
- 2. Highlight +OR/Else and select OK.



	-
▶ ■ 💥 🖫 ⇔ 4) T 🖂 ∰ 83 🖓 🖓 🛱 🤃	4
IF Statement Type ×	
Select the type of IF/Else you want to add to the macro. The type can't be changed after creation.	
Else +AND/Else	
HURYEISE	
2 OK Cancel	

- 3. Select an **IF Setting** option. This becomes the first item the IF/Else logic statement polls.
- 4. Select OK.



PROGRAMMING GUIDE

- 5. **Double-click** on the IF statement.
- 6. Select Add Condition.
- 7. Select an **IF Setting** option. This becomes the second item the IF/Else logic statement polls.

The macro only triggers if **EITHER** conditions are met.

8. Select OK.



	Universal : Example					
	Þ i 🌢 🔳 i 🗱 🛱 🖨	> 1 🚯 T 🚾 🏦 🐯 🎲 🗭 🗇 🔩 🛛				
_	Power On/Start Power	r Off/Stop				
5 🖳 🕼 (Device Power Cable:Living Room, ON)						
_	ELSE					
	*					



Universal : Example					
🕨 🕒 🔳 😫 🖳 🖘 🚯 T 🖬 🎪 🐼 🖧 🕆 🖓 🛈 🔩					
Power On/Start Power Off/Stop					
🙁 IF (Device Power Cable:Living Room, ON)					
OR (Device Power Blu-ray:Living Room, ON)					
ELSE					
•					
<u></u>					



PROGRAMMING GUIDE

TOTAL CONTROL 2.0 FLEX

UI & Macro Editing: Event Macro

Also known as Automation Macros, this sub-step is used to program system events that require little to no interaction from the end-user.

Below are the available events:

• **Device Events:** Certain two-way devices support various Device Events that can trigger any macro with a change in the environment.

Z-Wave integration provides a system with the greatest number of possible events (door locks, door unlocks, lighting event, etc.).

- Interval: This type of event macro allows the programmer to program a macro that continues to reoccur after an allotted amount of time (up to 720 minutes)
- **Schedule:** Allows the programmer to configure macros based on a schedule. This feature utilizes the astronomical clock of the MRX base station and can only be programmed by the installer.
- **Geo-Fence:** These macros use the GPS location of a URC mobile device in order to trigger macros when arriving or leaving a location. The macro that triggers is configured here; however, the location is set from the app.
- NFC: Used in conjunction with NFC tags/triggers, can activate almost any macro with just a tap. Currently, only supported on Android device. Program macros in Total Control Flex 2.0 and assign them to NFC tags through the app.

Step 10 Main Menus/Layouts: Event & Scheduling		
🖹 🖹 👰		
Create Device Link Create Layout Macro &	JI Special Macro Event Macro	
Select Type of Automation Macro :	Automated Macro :	Connected Device
Device Event 👻	🕨 🔍 🔳 😫 🖳 🗇 🚯 T 🖬 🎪 閉 🍰 🖗 🖓 🔍	Connected Device 🔹
Select Group :	Power On/Start Power Off/Stop	Living Room 🔹
General		Cable
Add/Delete Automated Macros : Delete Add Macro Enable Name		LAST CH PG+ CH PG- PLAY STOP PAUSE REW FF



PROGRAMMING GUIDE

UI & Macro Editing: iOS & Android

The TKP-7600 supports both landscape and portrait; however, it only supports one viewing mode at a time. URC Mobile supports both landscape and portrait. Both orientation must be programmed separately.

Follow these steps for a basic setup:

1. **Create Device Link:** As with the TKP-7600/TDC-7100 a button needs to be added to the interface.

Drag and drop a graphic from the **Icon Category** window into the simulator to add a button.

2. Create Layout: Select a button layout.

Select the **Device** (i.e. Watch Cable) and choose an available **button layout** (Standard Device, Standard Keypad Page, etc.).

Select Add Pages to confirm the button layout selection.



					Prev Device	Next Device	Add Pages
Preview							OverWrite Pag
				_	Select Device :	Select Button La	yout :
	CH+	CH-	Prev	Info	Standard Device Watch TV [New]	Standard Devic Standard Keyp Standard Nav P Standard Other	e ad Page age Page
			2	3		Standard Trans XL Device XL Keypad Page XL Nav Page	port Page
			5	6		XL Other Page XL Transport Pa	ge
			8	9			
			0	Enter			
		Key	/pad				
	•	•	Ш				
	144	••	*	₩			



PROGRAMMING GUIDE

- 3. **Macro & UI:** By default the portrait view is seen first for phone types and landscape for tablets.. Refer to pages 51-68 for full details on how to program, customize, and configure the button added on the previous page.
- 4. **Model Tree:** After configuring the portrait view, the landscape view must be programmed separately.
 - a. Select the **landscape** view button.







PROGRAMMING GUIDE

5. URC Mobile Landscape Mode: Utilize the Image Gallery to add a button onto the Mobile Device Simulator.

Use the **Macro** window and **Connected Device** window to program the button.

For full details on how to program this button please refer to pages 51-68 of this document.





PROGRAMMING GUIDE

Step 11: Punch Through

Punch Throughs allows the programmer to quickly define shortcuts for various commands in the system. For example, when the end-user is on their Blu-ray pages and press the Vol + button, the system wants to Punch Through from whichever device is controlling the audio for that room (AVR, Soundbar, etc.).

These settings must be configured for every URC Interface and room in the system:

- 1. Select the **Zone/Room** (i.e. Game Room, Bar, etc.).
- 2. Select a Model Device (URC Interface, i.e. TKP-7600, TDC-7100, etc.).
- 3. Select a **UI Device** (i.e. Watch Cable, Main, etc.).
- 4. **Punch From:** Choose the device that controls the action

Volume, Mute: Use the drop-down menu to select from any devices on the Project Tree to use as a **Punch Through** device. When on the selected Punch To device, the Vol +, Vol -, and Mute commands are sent from the selected **Punch From** device.

Channel: Use the drop-down menu to select from any devices on the Project Tree to use as a **Punch Through** device. When on the selected Punch To device, the **Ch** + and **Ch** - commands are sent from the selected **Punch From**.

Navigation: Use the drop-down menu to select from any devices on the Project Tree to use as a **Punch Through** device. When on the selected Punch To device, the **Up**, **Down**, **Left**, **Right**, **Select**, **Menu**, **Exit**, **Info**, **and Display** commands are sent from the selected **Punch From** device.

s	tep 11 Punch Through	
	Punch To :	Punch From :
	1. Select Zone :	Volume, Mute :
1	Living Room 🔹	[None]
	2. Select Model :	Channel :
ſ	TKP-7600 *	[None]
	3. Select Device :	Navigation :
	Main	[None]
	Standard Device Watch Cable	Play,Stop:
	Other Devices	[None]
		Number (0-9, +10, ENT) :
		[None]
L		_
	Select All Clear All	
		Save



PROGRAMMING GUIDE

Play, Stop...: Use the drop-down menu to select from any devices on the Project Tree to use as a **Punch Through** device. When on the selected Punch To device, the **Play, Stop, Pause, Rewind, Fast Forward, Skip Back, and Skip Forward** commands are sent from the selected **Punch From** device.

Number (0-9, +10, ENT): Use the drop-down menu to select from any devices on the Project Tree to use as a **Punch Through** device. When on the selected Punch To device, the 0-9, +10, and ENT commands will be sent from the selected **Punch From** device.

5. Select Save.

itep 11 Punch Through			
Punch To :	Punch From :		
1. Select Zone : Living Room ▼ 2. Select Model : ▼ TKP-7600 ▼ 3. Select Device : ▼ Main Standard Device Watch Cable Other Devices	Volume, Mute : [None] Channel : [None] Navigation : [None] Play,Stop : [None] Number (0-9, +10, ENT) : [None]		
Select All Clear All			
	Save 5		